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## ORIGINAL ARTICLES.

### AN INQUIRY INTO THE CAUSE FOR THE LARGE MORTALITY RESULTING FROM SUPRAPUBIC CYSTOTOMY. REPORT OF SEVENTY CASES, WITH BUT ONE DEATH.

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The large mortality shown to result from suprapubic cystotomy, from a careful study of the statistics collected from numerous writers, seems to be not only greatly in excess of what it should be, but quite inexplicable. It is to be regretted that the data relating to the subject are very meager, and that the statistics at the command of the profession pertain only to cases operated on for the relief of vesical calculus, or for hypertrophy of the prostate gland.

I have performed the operation seventy times, with but one death. The natural inference is therefore that among the reported cases the mortality is, to say the least, far greater than it should be.

Cabot, in *Morrow's System of Genito-Urinary Diseases*, submits statistics derived from 744 cases of suprapubic lithotomy, as follows:

Children under 14 years of age, 591 cases, 74 deaths, mortality .....	12.52%
Adults between 14 and 50 years of age, 100 cases, 12 deaths, mortality .....	12.00%
Old men, 83 cases, 17 deaths, mortality .....	33.07%

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Garcin has collected 106 cases, of all ages, showing a death-rate of 24.4 per cent. Taffier reports 120 cases (ages not stated), with a death-rate of 27 per cent. Dulles, in 231 adults, gives a percentage of 32.4, whilst in 132 children there was a death-rate of 21 per cent.

Since his first statement Cabot has collected the details of 165 cases (ages not stated), in which there was a death-rate of 15.15 per cent. The most recent statistics, those of Cabot and Berling, show an exhibit of 84 deaths out of 637 operations, a mortality of 13.1 per cent.

The mortality from suprapubic prostatectomy, in the first series of cases that have been tabulated, was 25 per cent. In the next reported series it was reduced to 18 per cent., and in the last group collected by Belfield it was 13 per cent.; and it is highly probable that, with the marked improvement in the technic of the operation, the more careful preparation of the patient and the greater attention to antisepsis, a much lower rate will be attained.

The clinical history of the fatal case in which I operated may be here briefly given:

The patient was a man, thirty years

old, much reduced in health and strength, having been an invalid five years when brought under my care. His medical attendant had made a diagnosis of "chronic gonorrheal prostatitis and cystitis." The man stated that he had been in perfect health previous to five years before presenting himself, when he contracted gonorrhea, which, some months later, involved the posterior urethra and bladder. This was followed by inflammation of the left testicle. From this time he had suffered from a severe inflammation of the bladder, which did not yield to treatment. He urinated at intervals of half an hour during the day, and from four to five times during the night. He suffered great pain at the head of the penis towards the close of each effort at micturition, with a burning pain along the entire course of the urethra when urinating. Frequently there would be a sticky mucoid discharge, which would ooze from the meatus after defecation. Examination through the rectum showed the prostate gland to be enlarged and very sensitive, pressure inducing a desire to urinate. The urethra was very sensitive; the prostatic portion of the canal was congested, inflamed and covered by a mucopurulent secretion. The capacity of the bladder was four ounces. On passing a staff a large calculus was discovered, occupying the base of the bladder, the mucous lining of which was markedly inflamed and thickened.

The urine contained albumin, and under the microscope were found epithelium, blood-cells and pus-corpuscles, together with crystals of oxalates and phosphates. The diagnosis was chronic prostatitis and cystitis, with a vesical calculus.

Two weeks were employed in getting the patient into the best possible condition to withstand an operation. He was prepared in the usual manner and the bladder was opened by a suprapubic incision. On passing the finger into the viscus, a large stone was found encysted at the base of the bladder, adherent to the walls of the organ. It was necessary to detach the stone from its environment by means of the Allis dry dissector. When freed it was found to be too large to be removed

through the incision. A Forbes lithotrite was therefore inserted and the stone crushed, the fragments being removed without difficulty. The patient died on the third day from suppression of urine. The stone weighed two and a half ounces. Large encysted vesical calculi are very rare, and patients thus afflicted usually succumb to operation.

Of the seventy cases in which suprapubic cystotomy was performed, death occurred in one, *i. e.*, a mortality of 1.4 per cent. Among these there were twenty-two of stone in the bladder, making a mortality therefore of 5 per cent. for suprapubic lithotomy.

The youngest person upon whom the operation was performed was three and the eldest was seventy-five years of age.

So far as is known, of the 70 cases 49 are still living and may be thus classified:

Vesical calculus.....	20
Prostatectomy.....	4
Permanent drainage for malignant disease .....	2
Tuberculous disease of prostate and bladder .....	3
Retention of urine from hypertrophy of prostate.....	2
Permanent drainage for hypertrophy of prostate.....	7
Chronic cystitis.....	9
Retrograde catheterization.....	2
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	49

As already stated, the patient who succumbed to the operation died from suppression of urine, three days after its performance. Had the operation been postponed, it is not probable that he would have lived many days. The other twenty cases lived for from three months to five years after the operation, dying respectively of old age, hopeless malignant disease, tuberculosis, uremia and abscess of the kidney.

The operation in cases of tuberculous and malignant disease was performed in order to drain the bladder, relieve pain, and prevent the necessity of frequent-recurring micturition, and in cases in which the employment of the catheter had become impossible. In every instance the immediate relief that followed justified the performance of the operation. The prostatic cases were all in old men; death in each case was incident to the years of

the individual. Life was rendered more comfortable by reason of the operation.

The following is a table of diseases and conditions of the cases in which I have performed suprapubic cystotomy:

Stone in the bladder.....	22
Prostatectomy.....	8
Tumor of the bladder.....	1
Permanent drainage on account of malignant disease of the bladder and prostate.....	6
Permanent drainage on account of tuberculosis of the prostate and bladder.....	8
Retention of urine due to hypertrophy of the prostate.....	2
Permanent drainage and hypertrophy of prostate (Hunter McGuire's operation).....	10
Stone in the bladder, with prostatectomy.....	1
Drainage and chronic cystitis.....	11
Retrograde catheterization.....	2
Total.....	71

Why eminent surgeons in performing suprapubic lithotomy should encounter such great mortality, I am unable to comprehend. After the bladder is fairly opened it ought not to add to the risk, or increase the danger of the operation, to gently introduce into the wound a pair of lithotrite forceps and extract a stone. Should the stone be too large to be removed through the incision in the bladder a Forbes lithotrite can be gently introduced through the wound, the stone seized and crushed, and the fragments removed by means of forceps. This maneuver I have practised without injurious results on several occasions.

The mortality of suprapubic prostatectomy ranges from thirteen to twenty-five per cent., being but slightly higher than that of the operation for lithotomy. This should not be, for it is obvious that the careful removal of the calculus after the operation should not complicate it in the slightest degree; whilst the excision of a portion of the prostate gland not only requires much longer time for the operation, but constitutes beside a very serious additional risk, often attended with copious hemorrhage. There is also danger of the development of sepsis, from the absorption of putrid matter with which the gaping wound at the base of the bladder is frequently bathed when cystitis is present as a complication. The same is true when

the operation is performed for tumor of the bladder. The greatest safety to the patient when so affected lies in free drainage, and hence the operation suggested by Belfield, that of suprapubic cystotomy, combined with perineal section, offers the best chance for recovery, as well as of enucleating the growth.

As regards the technic of the operation, when it is possible it is best to occupy a week or ten days in putting the patient in proper condition. Rest in bed, attention to the digestion and bowels, light, easily assimilated food, the administration internally and application locally of such remedies as will have a tendency to sterilize the urine, are the means to be observed. Should the patient be old, feeble, broken down in health and strength, or anemic, there is nothing that is more beneficial than the inhalation of pure oxygen for a period of half an hour, night and morning. For the operation the patient is, of course, to be prepared antiseptically in the usual manner.

The first question that presents itself is whether it is better to inflate the bladder with air or to fill it with water. I prefer the latter method, because when the bladder is distended with water it is not only a firmer object upon which to cut down, and hence easier to reach, but when the bladder has been incised the water escapes slowly, giving the operator abundance of time to enable him to insert his finger into the wound, thus plugging the outlet and stopping the escape of the fluid, and allowing an opportunity for examination of the viscus whilst it is partially distended, which is often of great advantage. On the other hand, when air is employed, the moment the bladder is penetrated the air rushes out, the organ collapses, and if the incision has not been made sufficiently large the opening is lost, and, as I have witnessed on more than one occasion, much precious time is consumed in discovering the opening.

The extent to which the bladder can be distended with safety depends on its capacity, as determined by distending it with water before the patient takes the anesthetic. This will be found to vary from two to sixteen ounces. As a rule eight ounces is amply sufficient, and is all that

is required. The operation can be performed very readily when the rectal bag is employed if only six ounces have been injected.

After somewhat extended experience with the rectal bag, I have arrived at the conclusion that the operation can be performed more speedily, and with greater safety to the patient, when that appliance is used. When the bladder has been distended with water, the rectal bag lifts the viscus from the pelvic floor and presses it firmly against the abdominal wall, and at the same time pushes the peritoneum out of the way. Distention of the rectum, without dilating the bladder, merely elevates the base of the organ and does not raise it to any extent; nor does it thrust the abdominal fold of the peritoneum aside. When both rectum and bladder are moderately distended the operation is performed with more facility, more speedily, and with greater safety. When pressing a full bladder firmly against the abdominal wall by distending the rectum, the surgeon is saved from making a greater lateral dissection of the prevesical fat than is absolutely required to reach the viscus, thus preventing in a great measure the danger of infiltration of urine into the adjoining structure.

Time is thus saved, which is a very important factor in the case, especially in operating on old or debilitated persons. With bladder and rectum distended, the viscus should be opened in from three to five minutes after making the incision through the skin. In many cases of vesical calculus, I have removed the stone and closed the wound in from eight to ten minutes after making the incision. The rectal bag should never be distended beyond *ten ounces*.

Finally, when the rectal bag is employed, if the operation be for the removal of stone, tumor, or diseased prostate, the base of the organ is lifted well up from the pelvic floor, when the work can be done with much more ease than if this precaution be omitted, as the *bas fond* is more nearly within reach of the index-finger. Hence, the natural conclusion is that the rectal bag should not be dispensed with.

As a rule, I place the patient on a perfectly flat, hard, horizontal table, and sel-

dom employ the Trendelenburg position unless the patient is very corpulent, or the bladder so contracted by disease that it will hold but a few ounces of water, and this is necessarily very deeply seated in the pelvis.

We have a choice between two incisions—the vertical, and the horizontal, suggested by Trendelenburg. I usually prefer the vertical, and find it more satisfactory in the average case. The horizontal incision is better adapted to cases in which the individual is very stout, or when the bladder is contracted and incapable of much distention.

A small incision, from two and a half to three inches in length, is made, beginning at the top of the pubic bone, extending upward in the median line, dividing the skin, superficial fascia, and sheath of the recti muscles. The incision can be lengthened if necessary. As soon as the muscles are exposed, the *linea alba* is looked for, the muscles separated by means of an Allis dry dissector, and the index-finger of the right hand passed into the wound, and carried directly down to the pubic bone, where the attachment of the fascia is very slight and can be easily torn through. The fascia is then drawn upward, together with the prevesical fat and the fold of the peritoneum, if it be present. Retractors are now inserted, and the sides of the wound widely separated, and an ocular inspection of the bladder made to determine whether or not the peritoneum and fat are well out of the way. When this is decided a tenaculum is passed *transversely* to the muscular fibers of the bladder and held by an assistant. The operator then passes his index-finger down in front of the tenaculum and rests it on the wall of the bladder, while with the right hand he carries a bistoury along the index-finger of the left hand as a guide, with the back of the knife to the tenaculum, directly into the organ, making an incision large enough to enable him to insert the index-finger of the left hand as the knife is being removed. By means of hemostatic forceps on each side of the incision, the walls of the bladder are grasped by an assistant holding the instrument, and the surgeon proceeds with whatever operation has to be carried out.



When the operation is completed the rectal bag is removed, and a large-sized rubber drainage-tube is inserted into the bladder, care being taken to carry the tube to the bottom of the organ when it is to be stitched in place. The wound is then closed; the suture (silk-worm-gut) must include the recti muscles. The incision should be closed up close to the drainage-tube. The tube is then carried to a vessel under the bed, in order that the contents of the bladder may be constantly carried away and the patient kept dry. Much discussion has arisen as to whether this method of drainage is satisfactory, the objection being that it is not in accordance with the laws of physics. I have employed it in all my operations, and have never known it to fail. In order to drain properly, the end of the tube must rest on the bottom of the bladder, and the incision must be closed tightly around it.

To avoid extravasation of urine, and the development of sepsis, Senn has suggested that the operation be divided into two stages: First, cutting down and exposing the bladder, and then packing the wound with iodoform-gauze for five days. At the end of this time the bladder is to be incised in the usual manner. I have not found it necessary to do this, as I have never met with any of the evil consequences of infiltration of urine, and infection of the edges of the wound to which Senn refers. If drainage is properly employed in the manner that I have indicated, no evil consequence will ensue.

If during the operation the peritoneum should unfortunately be cut, it should be immediately closed by means of a Lambert suture, the bladder exposed in the usual manner, the wound packed with iodoform-gauze, and the viscus incised on the fifth day, after the manner suggested by Senn.

Regarding the application of sutures to the bladder after an operation, I have resorted to the method in five cases, four times with success. I do not think that sutures should be applied if the organ is contracted, or the walls thickened from disease, with marked cystitis, or if putrid and alkaline urine be present. After the suture is applied, a small-sized drainage-tube is placed on top of the organ and

brought out through the skin-wound. This acts as an indicator; should there be any leakage of urine through the cut in the bladder, it will show itself through the drainage-tube on the dressings, in which case the sutures should be immediately removed, and the wound opened and allowed to granulate. The drainage-tube is usually removed on the third day.

With the experience and success that I have had in suprapubic cystotomy, I am forced to the conclusion that the suggestion that I have offered in reference to the technic of the operation must be correct, and the probable reasons for the large mortality in the hands of other operators are:

- 1st. Want of proper preparation of the patient.
- 2d. Over-distention of the bladder, due to a want of knowledge on the part of the operator of the capacity of the organ in its diseased condition.
- 3rd. Non-employment of the rectal bag; or
- 4th. Over-distention of the rectal bag.
- 5th. Extensive and unnecessary dissection of the prevesical tissues.
- 6th. Want of proper adjustment of a drainage-tube of sufficiently large caliber.
- 7th. Injury of the peritoneum by the use of the knife after dividing the sheath of the rectal muscles.
- 8th. Loss of time, after the patient has been etherized, in exposing the bladder, and a want of knowledge after the bladder has been exposed, as to whether the viscus is free from the peritoneal folds.

#### Curious Prehistoric Monkeys.

In several places in the Cape Colony and Orange Free State, of South Africa, caves have been explored which yielded hundreds of mummified remains of a queer species of six-fingered monkey. All of the full-grown specimens of this remarkable race have the tail situated high up on the back, from three to five inches further up than on the modern monkey—and other distinguishing marks, such as two sets of canine teeth, beards on the males, etc. Whether these were mummified by human beings, who formerly held them in reverence, or were overtaken by some catastrophe, such as a sudden convulsion of nature, or a cataclysm which entombed them in their caves, and thus preserved them, is a secret that can never be known.—*Science News*.

## THE HOT-AIR TREATMENT OF GOUT AND RHEUMATISM.

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I would like to call attention to the effects of the application of highly-heated, dry air in the treatment of chronic rheumatic and arthritic cases of long standing; not but what acute ones are relieved, but that the results in the others seem more remarkable.

The use of heat as a remedial agent in rheumatism and gout is by no means new, for nineteen hundred years ago the Pompeians employed hot air for the alleviation of those diseases now classed under the head of lithemia. Then, too, the early Romans, to the number of 25,000 daily, patronized the luxurious baths of Caracalla, the caldarium being considered an important factor. They were not the poor or the ignorant, but the rich and the middle intelligent classes, who took the hot-air treatment, lying upon marble slabs covered by rugs or matting. They were then massaged, and afterwards rubbed with perfumed oils. All this, however, did not prevent them from contracting chronic forms of those diseases, with their attendant deposits and deformities, or from transmitting the tendency, throughout long ages, to their descendants throughout the capitals of Europe, and, later on, of America. It is quite well established that those Romans, who took active physical exercise, did not suffer to any great extent, and in our own day, our oarsmen, baseball and football teams, and bicycle riders are tolerably exempt.

I scarcely think that the inhabitants whom Columbus found here had the lithemic tendency. They did not have the knife and fork, the tea-cup and saucer, or the deadly sugar-bowl. They lived in the air and sunshine, and tore their food with their teeth, which remained sound and firm, and did duty for a lifetime. It was not a refined style of table-manners certainly, but they had no gastro-intestinal disturbances, which lead to lithemia and all its baneful consequences.

It is only in this nearly twentieth cen-

tury that attention is being paid to proper mastication; that we are taught how to eat properly, so that the ferment in the saliva may break up the starch-granule, and thereby aid digestion; and that we must chew our milk as well as our bread. It is proved, too, that living largely upon nitrogenous food increases the amount of uric acid in the blood. Under proper methods this may be excreted, and thereby cause but little injury to the system; but in living a life of ease, and in *not* earning his livelihood by the sweat of his brow, the individual surrounds himself with luxurious conditions conducive to its production and retention, and lays the foundation of those diseases of nutrition characterized by imperfect oxidation of the tissues. If the accumulation of this uric acid be confined to the liver, spleen or other organs or tissues, it causes local disease; but when swept into the alkaline blood, it produces a general lithemic condition.

Occasional deposits may occur by an excess or error in diet, without much disturbance of health.

The exact mode of production of uric acid in the body is still a matter of uncertainty, but, according to the majority of workers in this field, it is undoubtedly associated with nitrogenous metabolism, and the acid represents an imperfectly oxidized form of nitrogenous material. Its final destination is its conversion into urea, but, for lack of oxidation in the tissues, this process is checked.

Haig has told us that continued retention of uric acid in the blood is incompatible with healthy function. Let there be a change of weather, and the patient be ever so slightly chilled, the uric acid is thrown down, and deposits are made in the vicinity of joints and elsewhere, and he suffers from an attack of gout. The acid accumulates through faulty metabolism. We then find acid dyspepsia, and other disorders of digestion, while disturb-

ances of the nervous functions, and of the circulatory system in general, exhibit prominent features of the arthritic diathesis. Congestive headaches, neuralgias, vertigo, sciatica, depression of spirits, hot hands and feet, hay-fever, asthma, bronchitis, cutaneous eruptions, muscular rheumatism and gout, are all due to a lithemic condition. Loss of sleep, intellectual or physical fatigue, the continued use of beer, wine or articles containing dextrin, sugar, etc., favor the deposit in the tissues of those having a lithemic inheritance.

As age creeps on, deranged conditions of digestion ensue, and, in fact, the tendency, once acquired or inherited, remains for life.

Foul breath, coated tongue, constipated bowels, headache, bad temper, nervous irritability, tenderness over the liver, flatulency, sometimes gastralgia, occipital headache, throbbing at the temples, are all symptoms that we meet with in our every-day life among business men, who indulge in too much meat, sugar, coffee, tea, tobacco, starchy foods, beer or wine, or both, and who have insufficient amount of open-air exercise for carrying on the metabolic functions, and for aiding the free excretion of uric acid and urea. Very often we find the individual suffering from a rheumatic fever, or an acute attack of the gout, which serves to clear the organism by the rapid oxidation which goes on in the tissues surrounding the joints. This disposition of the salts has been made a matter of certainty, through the use of the skiagraph.

To prove that nature is making an effort to relieve in these cases, we have only to make Garrod's test by putting filaments or threads into serum taken from a blister. After many hours the threads will show the deposit of uric-acid crystals, while if the serum is taken from over the joint, there will be no uric-acid deposit upon them. The acid has been oxidized by nature's process, and sodium urate is left. In this way we may explain the disappearance of uric acid from the blood, as the attack culminates and the organism is cleared temporarily. The storm is over for the time being.

If, however, we have repeated attacks, and if, through age, we have less power

to throw off existing conditions, the subsidence of the disease will be less complete. Oxidation will be only partial, deposits will continue, and at last we have the conditions known as chronic gout. Then uric acid is constantly stored up, the infiltrated tissues undergo a secondary process of inflammation, and articular ankylosis is developed. We have also muscular atrophy as a consequence of the defective nutrition.

Many of the so-called nervous prostrations and neurasthenias afflicting overworked men and women are really nothing more than cases of lithemia, induced by faulty metabolism, through the want of having time or of knowledge of how to live and exercise correctly. Each case of this kind should be made a special study, as each is a law unto itself and needs individual care as to diet and general methods of living.

Haig says further, that diet is of the first importance and I think that exercise in the open air should come next when possible. I have found that my cases of asthma, bronchitis, hay-fever, tonsillitis and kindred diseases are mainly due to lithemia. Many of the patients so afflicted have a disgust for water and seldom drink it. They only use it when made into tea and coffee as a beverage with which to wash down their food, and it must be sweetened with a large quantity of sugar. It is my practice to require them to drink as much pure filtered water as possible, before and after meals.

Exercise increases the oxidation of the uric acid and eliminates it from the system, and I know of nothing better for the purpose than the proper use of the bicycle. By rapid motion in the open air, the lungs are filled with the necessary oxygen, resulting in oxidation of the blood and the uric acid in it. The circulation is increased in parts in which it has been deficient, and they are thereby strengthened. I also consider bicycling a mental and physical discipline which improves the nervous system of the poor lithemic patient.

Lithemia is now an all-prevailing disease, and physicians are looked to for help. We must remedy the existing evil so far as possible and educate the people to prevent its progress. Certain constitu-

tional remedies have been found very useful, and dry hot air of an extremely high temperature is a powerful therapeutic adjunct. For its successful application, I have had constructed a copper cylinder having many advantages over those seen in the London hospitals. With this American apparatus I am able to apply and easily regulate hot, dry air ranging as high as  $320^{\circ}$  and even higher, for from 40 to 60 minutes, that being the time allowed for a single treatment. The temperature of the body in some cases remains normal or nearly so, and in others varies up to  $100^{\circ}$ . The pulse ranges from 80 to 104, the latter the highest I have yet seen.

The first effect is upon the peripheral circulation and the terminal nerve-filaments in the skin. Under the stimulus of the hot air, the cutaneous blood-vessels first contract and then relax, thus causing profuse diaphoresis. The circulation is enormously increased and the color of the skin becomes a vivid red. Pain and stiffness are greatly diminished and, in time, entirely relieved. The anodyne effect is very great at a temperature of  $300^{\circ}$  and upwards. Many prefer it at that height as being so comfortable. When fibrous articular adhesions have formed, more speedy relief is found by breaking them up under chloroform and then applying the heat. I have not yet seen any injurious effects from this treatment, but I have seen cripples give up their crutches and useless hands become useful. Pain and effusions have disappeared and even parts not directly treated have been in a measure relieved.

It is greatly a matter of patience and perseverance and intelligent appreciation on the part of the patient and of his or her proper management, attention to diet and daily habits, by the physician. Miracles must not be expected; nature takes time for her recuperative processes and the patient must be made to so understand this. I beg to cite herewith a few cases:

Mr. B., aged 63 years, had been on crutches for six months in consequence of an injury to the leg and ankle. After the third treatment he discarded the crutches for a cane, and at the fifth, he came without any support whatever. After that he walked forty-five squares and thought on

reaching home that his ankle felt a little weak and so came for the sixth treatment, after which he walked four miles.

Mrs. C., aged 53, had rheumatism for many years, and her mother had been a sufferer from the same complaint. She could not stand erect or bend the knee without great difficulty. She had to be assisted in and out of bed. She had no cardiac lesion, nor had she been laid up with fever. After the first application of the highly heated air, at  $260^{\circ}$  for one hour, the leg could be easily flexed and much soreness had disappeared. After the second treatment the entire soreness was removed, and upon the sixth she was discharged perfectly well.

Mr. H., aged 64, a case of obstinate sciatica, was cured in one treatment at a temperature from  $212^{\circ}$  to  $222^{\circ}$ .

Mrs. A., 47 years old, has had rheumatism for several years. Her right elbow was ankylosed at nearly a right angle, the left not so badly so. She could feed herself with difficulty, but could not dress or undress herself. There was considerable thickening of the joints of the thumb and fingers. The muscles of the arms were much wasted; one knee was sore and stiff and the leg muscles were atrophied and bound down by deposits. She had no cardiac lesion, but had suffered from inflammatory fever. After three treatments, she regained some of the movements of the arms and hands, and after the fifth, at a temperature of  $312^{\circ}$ , she surprised her maid by dressing herself. She has now nearly the full use of her arms and is constantly improving to her great delight.

Miss R., aged twenty-four, suffered from writer's cramp in consequence of intense neuritis of the thumb and forearm due to rheumatic deposits. The muscles of the thumb and wrist were very much puffed and swollen. There was severe pain upon the use of the pen, the patient being a cashier and accountant. The first treatment took away all the swelling and soreness. After the fourth she considered herself cured.

Miss B., sixty-three years old, is a case of rheumatic gout of twenty-four years' standing. The joints were all more or less enlarged, the knees measuring twenty-two and one-half inches round. There



was great infiltration and constant pain, with grating sounds upon motion. It was impossible to move or turn herself in bed without help. She could only get about with the aid of crutches, and then with the greatest difficulty. The muscles of the leg were very weak from the want of use, being for many years bound down by adhesive inflammation. The ankles were swollen and very sore. The elbows were enlarged and painful. The fingers were much out of shape. This patient was carried to and from her carriage in a chair on the occasion of her first visit to the office, but the size of the knee diminished one and a half inches after the first application of the heat. After that she discarded the use of the chair. She takes daily treatments, and the knees are now reduced two and a half inches in size; the pain and soreness are passing away. She can turn and help herself in bed. The outlines of the patella can be defined and the grating sound is not so marked. She bears a temperature of from  $250^{\circ}$  to  $290^{\circ}$  and improves each time. This case has never been amenable to other treatment and has steadily grown worse. The patient is an intelligent woman and knows that the process is a slow one; but from the relief already experienced she bases great hopes of being restored to comparative comfort.

Without citation of further cases I can only say that so far the use of the improved American cylinder has been highly successful, and I thoroughly believe that in the treatment of the various chronic lithemic conditions more can be accomplished by this method, properly managed, than by any other means.

#### Medical Inspection of Schools.

Daily medical inspection of the public schools of New York City was begun on the morning of March 29. Such inspection was decided upon some time since, but the preliminary work, before the system could be placed in practical operation, was very great and demanded much time and thought on the part of the Board of Health. The work is to be performed by

one hundred and fifty medical examiners appointed under civil service rules. The results of the first day's inspection amply proved the wisdom of such a system and clearly showed the results for good which its judicious enforcement will attain. On that day one hundred and forty children were excluded from the schools. There were fourteen cases of diphtheria, three of measles, and one of scarlet fever; thirty-five cases of contagious eye diseases, three of mumps, and one of croup; of parasitic diseases there were thirty-five cases where the head was affected and twelve of the body; and there were eight cases of chicken-pox and eight of skin diseases.

These results are simply a tangible demonstration of what every observing practitioner has long believed to be the source of much contagious disease. The results of the work in New York are not materially different from those obtained by medical inspection of the schools of other places. The more dense the population in any locality the greater the necessity for such inspection and the more decided will be the results. New York, therefore, with her dense population in certain districts, may be expected to derive an unusual amount of good from such inspection. If the work is judiciously and conscientiously carried out, it will certainly aid materially in restricting the spread of contagious diseases and in reducing the death rate.

The actual number of cases excluded from the schools will soon be but part of the good accomplished by the inspection. Parents, when they learn that their children will not be received at school if ill with any form of contagious disease, will be much more cautious in sending them. It will also prove a valuable means of teaching them that certain diseases of the eye and skin are contagious, that the stage of desquamation of the infectious diseases is dangerous, and that a sore throat, even if apparently mild, should receive attention. The results, both direct and indirect, will far more than outweigh in value the expense involved. The money thus spent is certain to prove one of the best investments, from a financial point of view, which the city could have made.—*Archives of Pediatrics.*

## INFANT FOOD.

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A noted wit once said that, "The children born of noble blood are those who have been happy in the selection of their parents." What a text could be found in the converse of this witticism, provided that the true import of a vigorous and healthy offspring could be properly appreciated!

In view of the many ailments incident to the frailty of infant life, and the multitudinous conditions that either retard or develop hereditary tendencies, the proper nutrition of the infant must claim first attention, yet not to the exclusion of other and doubtless important considerations. Nature has made ample provision for the propagation of the species, and though the violation of her laws, either through ignorance or accident, past or present, is sure to be resented, she is ever ready to repair an injury or furnish a remedy if we will but heed her teachings.

The study of medicine is the study of nature. Science reveals treasures which nature has already adopted in our needs. The practice of medicine is the utilization of these science-revealed treasures for the remedying or the prevention of disease. Through the mother nourishment is supplied to the infant. When for some reason this supply is cut off, artificial feeding must be substituted.

Many have been the efforts made to supply an artificial food fully equal to mother's milk, one that under all circumstances will fully meet the demands of an infant deprived of the latter. It must be said that the perfect substitute is still to be found. Of the many such preparations that have from time to time been presented to the medical profession it may be said that all possess some merit, some more and some less. But at times, or in specific instances, any may fail, or prove of little value if not of positive harm. This is

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shown by the increasing prevalence of rickets and scurvy among artificially-fed children. True, the cause of failure to develop properly often may be traced to pre-existing disease. Yet in all cases greater benefit would have been derived from a food having the essential constituents of mothers' milk, and in the proper proportion. From time immemorial cows' milk in some form or other has been used as a substitute for the mother's milk, because best adapted and often most available. It is given pure, diluted, modified, sterilized, condensed, cold, boiled or in combination with other food products. And milk is still preferred by many, though with great diversity of opinion regarding the best method of administration. Each method has its special advantages and disadvantages so that the selection is always best left to the medical attendant.

Generally speaking pure milk from the cow is to be preferred in the rural districts where a sweet, fresh and uniform product is easily secured. In the civic districts, however, where milk coming from a long distance and subjected to much churning and change of temperature in transportation is the only product to be had, condensed milk, or one of the many artificial foods, either alone or in combination, is to be preferred to cows' milk because more stable and uniform.

The disadvantages of condensed milk arise from the excess of sugar and the deficiency of fats contained. These make it inadmissible for prolonged use by itself. When diluted six times, it has a nauseating sweetness, and is unsuitable for infant feeding. Yet in this strength the proportion of fats is slightly less than one-fourth that of mother's milk. Diluted fourteen to sixteen times, as is the rule for infants during the first month, it contains a mere trace of fat.

Sterilized and malted milks also have special advantages; yet in common with

most of the prepared foods they seem best adapted to meet *temporary medications*, rather than for *prolonged feeding*.

For nearly twenty years it has been my privilege to be associated with the St. Vincent Home, 18th and Wood streets, and with the St. Vincent Home and Maternity Hospital, Woodland Ave. and 70th street— orphan asylums sheltering from 300 to 400 children—where I have had the opportunity, under most favorable auspices, of testing the merits of many of the infant foods now found in the markets. In such institutions are weak and cachectic children in environments that are fairly hygienic and with the best nursing. Up to the present time I have employed no artificial food that has given me better results in a large number of cases than Eskay's albumenized food. I have found it palatable, easily assimilated and very nutritious. It is well borne and is well adapted to long terms of feeding. Infants fed exclusively with it develop symmetrically and are remarkably free from the alimentary disturbances characteristic of artificially fed children.

Encouraged by the success this food afforded me in these institutions I began its use in the clinics of the Charity Hospital, where my *clientele* averages from 20 to 60 infants per week. Here the results have been uniformly as good as those in the institutions.

In private practice I have found this food of great value for adults as well as children, in cases of great debility, mal-assimilation, gastric irritability and the like. In a case of extreme debility following gastric ulcer and the passing of biliary calculi, where nourishment could be taken only by rectal enemata Eskay's food was easily borne. The patient took it exclusively for ten days, and rapidly gained in strength. At the end of this time she added milk and cream in increasing quantities. Though now able to take her usual mixed diet, she yet continues the use of the food, since she finds it palatable as well as nutritious.

In this case and in typhoid fever convalescents, in fact in all cases of general weakness and gastric irritability, I prefer to begin by administering the food pre-

pared with water. In such cases the food when mixed as directed is too rich. As strength returns I prefer to add milk, or milk and cream, in increasing quantities to meet the indications. From the analysis recently made by Dr. Henry Leffmann, I observe that this food is a very near approach to rich mother's milk in its chemical constituents and their proportions.

I submit, in conclusion, this analysis and that of mother's milk according to Holt's, for comparison.

MOTHER'S MILK (Holt).	ESKAY'S ALBUMENIZED FOOD (Leffmann).
Fat .....	4.00
Proteids .....	1.50
Total Solids .....	12.80
	4.16
	1.76
	11.33

#### The Medicine Habit.

One of the most pernicious practices prevailing in this country, and, to a large extent, in all civilized countries, is the habit of medicine-taking. Many people are addicted to the habit of swallowing a drug of some sort for the relief of every physical discomfort which they may happen to experience, without any attempt to remove the cause of the disorder by correcting faulty habits of life.—*Modern Medicine*.

#### Medical Societies.

No man who ever attended a State medical society meeting could go home and truthfully say that it had not well repaid him for the sacrifice of the little time and money required. It is only those who never attend these meetings who have the audacity, and show ignorance enough, to say that it is time and money thrown away. It does pay. It broadens one's views to meet others and hear discussed subjects that are of importance to every medical man. It creates in one an ambition to learn, to study, to progress, for these meetings show to even the most advanced that there are others who know more about some things than he does himself. It pulls one out of the rut that he has allowed himself to get in. —*Western Medical Review*.

## THE INFLUENCE OF GENERAL MEDICINE ON THE AVERAGE DURATION OF LIFE.\*

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There are periods in the history of all communities, when problems involving the general welfare of society apart from legislative or municipal interest are considered. Not the least of these is one to which our own professional consideration is directed for the purpose of determining what real value the great advance in medicine bears toward lengthening human life, in face of the many social and criminal issues that serve to disturb modern civilization.

From birth to decay, man crowds into his life all the elements that make existence desirable, therefore it behooves him to cultivate the instinct of preservation which displays itself in all forms of animal life, but finds its highest expression in himself. Modern civilization is made up of a combination of conditions, reached through a gradation of changes, that have come down to us step by step through the centuries, attaining a point of excellence in all that pertains to health not heretofore existing.

The present age is one of great mental and physical activity. Great as the changes have been in a material sense, none the less striking have been the progressive steps in philosophy, the sciences and in medicine. Theories that prevailed in philosophy for many years have been ruthlessly set aside and entire systems of thought have been changed, while the advances in medicine within a comparatively recent period, have been in a ratio of progress far exceeding those of any similar period in the past.

In consequence of this display of activity in medicine and its allied branches, a satisfactory gain in the average duration of life has been achieved. If facts should prove this statement to be erroneous, it must be acknowledged that medicine, in all the word implies, has been a failure.

We have reason to entertain surprise

that so little has reached us of the history of the healing art. It was only after the brilliancy of Greece began to wane, as a result of lax morals and physical vices, that we hear of its origin in mythologic beliefs, and when before Æsculapius "medicine was blind empiricism and he alone knew how to perfect and form it into a divine art."

From the time of Hippocrates, 460 years before Christ, medicine gradually advanced to assume the place of an exact science. Aristotle, who lived about 384 B.C., made some dissections of animals and is the acknowledged discoverer of the nerves. The second century of the Christian era produced Galen, whose works were held in high repute through the traditions of the middle ages. No startling discoveries or celebrated names were recorded until the sixteenth century, when in consequence of a resumption of human dissections, a revival of interest in anatomy followed. About 1628, Harvey discovered the circulation of the blood. A few years later Silvius gave a description of the valves in the veins, and in 1691, Malpighi announced the theory of capillary circulation.

Earnest zeal and careful research marked the early years of the nineteenth century. With a rude magnifying instrument, Lieberkuhn, the anatomist, made some discoveries in the previous century, with which his name continues to be inseparably associated, but it was not until after the year 1826 that successive improvements rendered the microscope available for general scientific study. Excellent schools of medicine existed at this time in many of the centers of learning. The preservation of records and the multiplication of books became possible through the invention of the art of printing, and events were rapidly leading up to the triumphs that are making the present century remarkable in the annals of history.

Another important occurrence was the

\* Address of the President, Annual meeting Berks County Medical Society, January 12, 1897.



announcement by Bigelow, in 1822, of the self-limitation of many diseases. The year 1827 saw the birth of Lister, one of the greatest conservators of the race. The value of his discovery, if for antiseptic reasons alone, seems to be a permanent acquisition to the surgical art. The general application of anesthesia to medicine, surgery and obstetrics, through the introduction of ether by Morton in 1846, and chloroform by Simpson in 1848, has increased the range of operative measures almost indefinitely.

The advances thereafter were so rapid that it would be almost impossible to name them in the order of their succession. Each new advance has contributed to the diminution of human suffering and the prolongation of life. The general effect in decreasing the average percentage of deaths in civilized countries has been marvelous. An opinion, long accepted as a popular truth, that the average duration of life covered a period of  $33\frac{1}{4}$  years is not only reasonably correct, but fairly liberal when placed in comparison with the mean average duration of life as calculated by Domitius, Prime Minister to Alexander Severus (year of Rome 975; A.D. 222) when it was said to be 30 years. This low vitality may be a sequence of the subnormal conditions existing during those early years, but we cannot think it peculiar to Greek civilization, in view of the strong physical traits so long and sedulously cultivated by them for race development; nor of ancient Rome, when we consider that the sanitary regulations of the city itself were admirable. A supply of the purest water was abundant; pollution of a public stream was punished by death as an offense against the tutelary divinity of the stream; and cremation of garbage was practiced, displaying in all an admirable knowledge of sanitary science.

The first effort at a systematic registration of deaths was made by Great Britain in the sixteenth century, in considering how to avert the terrible plagues of that period. A plan was adopted, imperfect, but sufficient to give many important hints. The first step was to find where, and under what circumstances people died, and how different localities were affected. Much later, when the Poor Law Board

was created, a better system of registration was adopted; but it was only in 1837 that it was carried out with all the force of an Act of Parliament and with the co-operation of the physicians, surgeons and apothecaries. The law has been improved from time to time by many amendments, and finally in 1874, physicians were compelled to return certificates of death under penalty, as was then already the law in Scotland. In the city of London in the latter half of the seventeenth century, the mortality was at the rate of 80 per 1,000 inhabitants; in the eighteenth it was reduced to 50 as against 20.4 in the present day. In the cholera epidemic of the year 1849, the mortality from all causes in London was only 34 per 1,000 of population, and in the last two epidemics there was a still further decline. It is as certain that high mortality can be reduced by hygienic appliances down to a certain limit as it is that human life can be sacrificed.

In the United States the first official census was taken in the year 1790; and the last, or eleventh, in 1890, included features which permit us to approximate a general death rate of 20.8 per 1,000 of population. This is further reduced by a complete compilation both of enumerators and of registration returns for certain districts, making due allowance for deficiencies, in which the true mortality for the whole country was estimated to be about 18 per 1,000 of population.

In cities where records are based upon a regular system of registration, and generally upon burial permits, they are probably nearly accurate, and furnish a reliable basis for the computation of death rates. The cities of St. Louis, Buffalo, Washington and Indianapolis average a death rate of 19 per 1,000 of population. In New York, Boston, Brooklyn and New Orleans the death rate is higher, and averages about 26 per 1,000. The following table gives a comparative statement of the death rate in several of the largest cities in the world:

#### NAME OF CITIES.

Census.	N. Y.	Phila.	L'nd'n.	Paris.	Berlin.	Vienna.
1880	28.4	20.9	21.6	25.3	29.6	25.4
1890	26.2	20.7	20.4	23.3	21.5	21.4

This indicates that the average lease of life to the inhabitants of the above cities

is about as follows: New York, 39 years; Philadelphia, 48 years; London, 48 years, Paris, 43 years; Berlin, 46 years, and Vienna, 46 years. Sir Spencer Wells, in an address delivered before the Sanitary Congress at London in 1886, stated that the life table for Great Britain recorded 49 years, a gain of 19 years since the census of 1837. Since the mortality rate is higher in cities than in country districts, we may conclude that the estimate of 48 years for London in 1890, does not represent the average duration of life in Great Britain, but indications point to the addition of several years to the limit announced by Wells in 1886.

We have already stated that the mortality estimate of the last United States census gives a general death rate of 18 per 1,000 of population. The report for New York, a registration State by law, verifies the truth of the above estimate, inasmuch as the death rate in 1894 was placed at 18.25 per 1,000 inhabitants. For Pennsylvania we have no absolute vital statistics bearing on this subject. The law of March 8, 1860, made registration of births, marriages and deaths compulsory in the city of Philadelphia; that of April 16, 1870, extended the same provisions to the city of Pittsburg; that of May 5, 1876, made registration compulsory in cities having Boards of Health, and that of June 7, 1881, also made it compulsory in cities of the third class. In all these instances, the reports are to be made to the local Boards of Health. The law of June 6, 1893, made registration of births and deaths compulsory in counties in which local registration was not already provided for. The law of 1885, establishing a State Board of Health, calls for a registration of the above vital statistics in a Central Bureau at the State capital, but the Legislature has never been willing to furnish the money or machinery to put the law into operation. Pennsylvania cannot therefore claim to be ranked among the registration States, as no statistics of either the birth rate or the death rate of the State have yet been compiled. It might be proper for this society to forward a strong recommendation to the present State Legislature to supply ample means for the discharge of all important duties assigned to

the State Board of Health, particularly that of registration of vital statistics. This Commonwealth would then rank with nearly all other States of the Union in its general sanitary progress.

Our local death rate shows an exceedingly satisfactory condition of health. The president of the Board of Health of this city, an honored member of our society, in his annual reports for the years 1894 and 1895, announced the rates respectively as 17.95 and 15.36 per 1,000 of population, with a reduction below the above figures for the year 1896 to 14.75 per 1,000 of population.

Statistics might be continued indefinitely, would time permit, to prove that the average duration of life has been materially prolonged during the present century, but it is particularly gratifying to learn that the marked improvement of public health has apparently been more manifest within the past decade or two than in any other previous period. We can attribute this fact to no other cause than the results of conscientious effort on the part of a profession, earnestly interested in the physical welfare of mankind.

When we realize that this universal progress in the life rate is obtained against many issues opposed to the general structure of society, we have reason to feel elated over results thus far achieved by medicine, when pitted against foes as destructive as disease itself. No one will question the morbid influences of crime. Its increase in this country is markedly apparent from statistics given in the United States census report for 1890, in which we find 1,315 prisoners reported for each million of inhabitants, as against 1,169 in 1880, an increase of 146 per million for the decade, whilst almshouses, benevolent institutions and juvenile reformatories, as well as prisons, have not been built sufficiently rapid to meet the excessive demand.

We are also confronted with the evil resulting from the abuse of alcohol in its various forms. Statistics on this question are indefinite and often misleading, inasmuch as diagnoses and certificates are sometimes given at variance with the true state of affairs; nor may we always accept

the figures given by reformers, who in their enthusiasm will frequently make assertions not verified by facts. Notwithstanding its wide range of usefulness in the profession, it must also be acknowledged that alcohol is a great promoter of moral and physical ruin.

There are other conditions unfavorably affecting public health, such as ignorance and neglect of the laws of hygiene; improper marriages; morbid discontent among the dissolute and defective classes;

indifference to hereditary taint, etc., all of which leave their impress as opposed to the progress of medicine.

We may briefly conclude, therefore, since figures inform us of a gradual decrease in the average death rate, that medicine may assume some degree of credit for this happy expression of human welfare. From the lowest life duration of 30 years, the present average has advanced beyond 50 years, and medicine has by no means reached the limit of its possibilities.

## COMMUNICATIONS.

### THE HAND AS A TAMPON AND DILATOR IN PLACENTA PREVIA.\*

[ESSAY.]

A. F. MYERS, M.D., BLOOMING GLEN, PA.

Of the many vexatious trials with which the physician has to contend, placenta previa furnishes its quota. It is the alarming antepartum hemorrhage that causes him, as it were, to open his eyes and collect his wits. He has a difficulty to meet, and a complicated one at that; and if he wants to do justice to his patient as well as to himself, he must check that hemorrhage promptly and effectively. We will consider it then from the standpoint of a country practitioner who seldom sees such cases until the pregnancy is at or near full term, when, after a slight pain, a gush of bright-red blood ushers in the first stage of labor. Truly a serious condition confronts him. The history of the case indicates a mal-presentation; with the placenta centrally or marginally located, a living fetus in utero, the os dilated to admit only the index finger to determine the cause, feeble expulsive pains and frightful flooding; the accoucheur has good reasons indeed to doubt as to the final result. In making the digital examination, blood clots will be dislodged, leaving space to be refilled by more loss of blood. One natur-

ally thinks of tamponing, but it cannot always be securely done.

The diagnosis being established, labor should terminate with the least possible delay. Right here is the golden opportunity. Have the arm bared to the elbow, the hands and arm well cleansed with soap and water, finger nails short and clean, and the hand well lubricated; it will take only a minute, as absolute cleanliness is insisted upon as the simplest substitute for strict antiseptic midwifery. Then pass the hand, with fingers extended and the thumb resting within, carefully into the vagina. The vulva and vaginal walls will gradually yield; even if a little painful at first the patient will not resist, feeling assured that something is really being done to relieve her serious condition. The blood in the vagina will gush forth, but that is not so alarming as it may seem as it is past changing any way. The fundus must be well supported with the other hand so that the efforts made can be better gauged. The mind's eye should be kept upon the finger points aiming for that intractable os. The index finger should be passed into the cervix and the second finger as soon as possible; the third also followed by the thumb; the little finger

\*A discussion before the Lehigh Valley Medical Association January, 1897. Reported in *Lehigh Valley Medical Magazine*, and condensed for the *MEDICAL AND SURGICAL REPORTER*.

to be flexed within the hand to aid in completing the form of the tampon; and a powerful means is at command for constant dilation between the pains to overcome that rigidity.

At this period will be detected either one of two conditions which may influence the future course. The one is a rigid os due to organic changes, where the rigidity is due to an inflammatory or hypertrophic condition by which the cervical fibers have become thickened and fibrous. The edges feel thick and dense and the cervix has not disappeared. This organic condition is best overcome by allowing the uterine contractions all the time possible to force open the os, aided, between the contractions, by the fingers. Fortunately this condition is rarely met with.

The other condition—the more common one—where a functional rigidity depends upon a temporary spasmodic contraction of the oral fibers, is often associated with uterine inertia, or occurs in a nervous fidgety patient with a dry hot vagina. Here the fingers can do a vast amount of good in stretching those circular fibers. The fingers may be spread forcibly; no injury will be done. Those oral fibers will readily bear all the force that the extensor muscles of the fingers can exert upon them. If necessary dilate rapidly; a little perseverance will cause resistance, to disappear. The vagina being completely distended seems also to exert a favorable reflex influence upon the cervix. This relaxation may be greatly aided, however, by an enema of 30 grains of chloral hydrate, every hour until condition is relieved.

Time, aided by the hand, has brought matters to the vital issue. Forewarned is forearmed. The hand has been passed to the vantage ground and must be kept there. To remove the tampon now would be extreme folly. *It must be kept there*, even if it take hours for labor to terminate and relieve the accoucheur from his unpleasant position. The happy termination of the case and a grateful look from the patient will amply repay all the fatigue endured.

By this plan the physician is constantly posted upon what changes occur, and he likewise note what progress the case has made. Some blood may pass the fingers,

but the hand will effectually block its escape. There is your tampon and dilator combined—the best instrument under the sun.

After the operation has been once begun the patient must not be left until the labor is completed. While in this position a part of the placenta should be dissected from the uterine walls, the detached portion hooked down with the fingers will apparently arrest the bleeding. Having gained this advantage, the membranes, if not yet broken, should be ruptured and the head made to press upon the parts and aid the efforts made so far. If the presentation is unfavorable, the child must be turned and the breech made to engage. The fetus now will act as an effective plug; hemorrhage is controlled; the mission of the hand as a tampon and dilator is ended.

This procedure has additional advantages as a dilating agent. There may have been resistance in the vulva and vagina to admitting the hand, yet the dilation consequent to its use as a tampon has thoroughly prepared the parts, and especially the perineum, for passing the head and shoulders. It is gratifying to note how completely the entire birth-canal is relaxed for a rapid delivery should the use of forceps be necessary.

The position of the lying-in woman may be the choice of the physician; however due consideration should be had for the patient's comfort during this trying ordeal. The Sims position may be preferred by some, but the accoucheur cannot steady the womb so well. The dorsal position, or half-dorsal as some call it, seems to give the greatest comfort to the patient; moreover, the physician's efforts may be made to a better advantage. The dorsal position may expose the patient a trifle more should instruments be necessary, but when the hemorrhage is once controlled and the presenting part well engaged, the patient can readily be changed to another position.

#### REMARKS BY DR. C. P. NOBLE.

Cases of placenta previa are not all alike. They vary much as to gravity. In a general way this depends upon the relative location of the placenta—whether the placenta previa is lateral, marginal, partial, or central. Many patients having a



lateral or a marginal placenta previa deliver themselves spontaneously with little or no hemorrhage. The fact that cases of placenta previa vary in gravity gives the cue as to the treatment, as, in my judgment, all cases should not be treated alike.

The proportion of fetal deaths in placenta previa is high no matter what treatment is adopted; over half the infants are lost. In all the tables of statistics the fetal deaths are given as from 60 to 75 per cent. On the other hand, the mortality rate of the mothers varies from 3 to 30 per cent., depending upon the method of treatment adopted. Murphy, of Ireland, has published a series of sixty-one cases, with two deaths. One of these patients was moribund from sepsis when first seen; deducting this there are sixty cases with one death. These are the best results in a large series of cases of one practitioner of which I know. Lomer, of Germany, has published a list of twenty-eight cases in his own practice, with one death; and reports one hundred and ninety cases in the hands of various German practitioners, with nine deaths—about five per cent. These results are the best in a large series of cases that have been published. It is interesting to observe that the method of treatment adopted by Murphy and the German practitioners was practically the same. They believe in the prompt induction of labor, and that in all bad cases, delivery should be accomplished by Braxton-Hicks' method of podalic version.

Death from placenta previa is due either to hemorrhage or to sepsis; probably as many die from sepsis as die directly from hemorrhage. This calls attention to the statement that "it only takes a minute to clean one's hands before giving assistance to the patient." Doubtless this statement was a figure of speech on the part of the essayist, as it is impossible to thoroughly clean the hands without devoting considerable time to the process. Were it necessary to restrict ourselves to one method of cleaning the hands, the use of soap and water and a brush is the best; but there is no reason why, after doing this thoroughly, we should not endeavor to sterilize them by the chemical solutions. When there is time, it is better to clean the hands as thoroughly as possible before

making a vaginal examination, lest we prevent the patient dying from hemorrhage, only to have her die from infection.

In considering the treatment of placenta previa a difference should be made between cases in which the fetus is viable and those in which it is not; in other words, as to whether pregnancy has or has not advanced to the seventh month. The best results have been secured by those who follow the practice of inducing labor so soon as the diagnosis is made. Unquestionably this is the best practice for the mother, and for the child, when the child has reached the period of viability. Prior to this time, I favor inducing labor if hemorrhage is at all free, or if the patient is situated remote from medical attendance. In special circumstances, when patients can be under observation in an institution, or when there is little or no bleeding, great risk is not taken if pregnancy be allowed to continue to the period of viability. Thomas, in the United States, and Greenhalge in Great Britain, have been the most ardent advocates of the induction of labor, and this method has given the best results not only for the mother, but for the child.

It is well to consider in detail a number of methods which aid the practitioner in controlling hemorrhage.

1. *The tampon.* In my opinion, the tampon has killed more patients than any other method of treating placenta previa. It delays labor and favors the production of sepsis. It should be used only as a temporary measure to arrest hemorrhage, to enable the practitioner to procure professional counsel and assistance.

2. *The Barnes' bag* has a small field of usefulness. It may be employed to dilate the cervix and to produce a partial separation of the placenta.

3. *Partial separation of the placenta.* There is concord of opinion that partial separation of the placenta is of great service in controlling bleeding from placenta previa. In years gone by, when the principles of labor complicated by placenta previa were not so well understood, various theories were held by different authorities. It is interesting, however, to observe that they all agree upon this point. As the lower segment of the uterus dilates,

the placenta inevitably is more or less separated from the uterus, thus opening the uterine sinuses and promoting hemorrhage. By artificially separating the placenta, while considerable hemorrhage may take place for the moment, an opportunity is given to the uterine tissue to retract, and in this way to close up the blood vessels and prevent further hemorrhage.

4. *Manual dilatation* is one of the most valuable means at our command in dealing with placenta previa. Dr. P. A. Harris, of Paterson, N. J., has systematized a method of manual dilation which makes use of the flexor instead of the extensor muscles, in addition to having the advantage of the fingers and hand used as a wedge. It is easy to test the difference in the strength of flexion and extension of the fingers. Dr. Harris' method consists in introducing a hand, or half hand, into the vagina (the patient being anesthetized), then introducing the index finger into the cervix and dilating it somewhat. Then the thumb is introduced, followed by the index finger; and the thumb being held rigid, the index finger is flexed across its palmar surface, stretching the cervix sufficiently to enable the thumb, middle and index fingers to be introduced. The thumb is again held rigid, and the other fingers flexed across its palmar surface. The process is repeated until all the fingers are introduced, and flexion practiced as before. The thumb and fingers, held "cone-shaped," may also be used as a wedge in dilatation.

It is essential to use anesthesia to get good results from manual dilation. I have had no experience in the use of chloral to favor dilation in placenta previa, and should, upon theoretical grounds, not care to use it in this condition, because of its well-known depressing effect upon the heart. The danger of shock and asthenia from hemorrhage is too great to take any chances.

To go back to the management of placenta previa, the most important point is to urge the prompt induction of premature labor, under the limitations already laid down. In cases of lateral or marginal placenta previa with little or no hemorrhage, after manual dilatation of the cer-

vix and partial separation of the placenta, if there is little or no bleeding, a vertex presentation, and good pains, as a rule the membranes should be ruptured and the case left to nature, or to nature assisted by the forceps. This is the method which has been followed by Murphy, with the admirable results referred to. On the other hand, should there be much hemorrhage, or should the case be one of partial or complete placenta previa, it is best, without dilating the cervix in full, to introduce two fingers, partially separate the placenta, then rupture the membranes, and perform podalic version after the method of Braxton-Hicks. When the leg is drawn down, it acts as a plug, and, as a rule, hemorrhage ceases. Should it recur, traction upon the leg arrests the hemorrhage and, at the same time, facilitates labor. The case should be left to the natural efforts unless the condition either of the mother or child demands rapid extraction. The results have been better when delivery has not been too much hurried.

I should like to urge the use of salt solution, by transfusion into a vein, by introducing it under the skin or under the breast, or by introducing it into the stomach and bowels, as an important point in the treatment of collapse due to hemorrhage, whether from placenta previa or from any other cause. Every practical surgeon will testify that it is the most powerful and effectual means of saving life in jeopardy from hemorrhage, which we have at our disposal.

#### REMARKS BY DR. J. I. ROE.

While many practitioners have undoubtedly made use of this method, I believe the first to describe it in detail was Dr. P. A. Harris, in a paper read before the Pan-American Medical Congress, and published in the *American Journal of Obstetrics* for July, 1894. The method differs slightly from that described by the essayist. When the os is sufficiently dilated to admit the index finger, Harris advises that instead of the second finger the thumb be next introduced alongside the index finger. When the canal is so dilated as to admit both thumb and finger, by alternately flexing and extending the first and second phalanges, con-

siderable force can be exerted which soon results in dilation sufficient to permit the introduction of an additional finger. The process is continued until the operator is able to introduce the whole hand. It will be observed that in this method two mechanical forces are brought to bear; first, that of the wedge, as formed by the tips of the thumb and index finger; and second, that of the lever, as in the act of flexion and extension described.

Practically, however, the method of the essayist is the more natural, and in my experience I have found no difficulty in its use. When dilation is sufficient to allow the introduction of one finger, it is not difficult to enlarge the opening by lateral pressure combined with flexion, so as to admit the tips of the second finger; and so on until three or four fingers can be introduced. The dilation having been so far accomplished, the thumb can now be advantageously brought into action. By placing it between the tips of the four fingers, a wedge or cone-shaped body is formed, which is a most effectual dilator, and by means of a slight rotary motion, combined with flexion of the fingers, it will be possible to safely and rapidly complete the dilation.

This method of dilation can advantageously be made use of in every case where it is desirable speedily to empty the uterus of its contents. Placenta previa is doubtless the one condition in which prompt dilation and speedy delivery are of the utmost importance both to mother and child, and no time should be lost, once a hemorrhage has occurred, and the diagnosis confirmed by examination. Temporarily measures, such as tampons, ergot, etc., are useless, and should not be relied upon after the seventh month, nor before if the hemorrhage has been at all copious. Prompt action is imperative. The patient should not be left for a moment until delivery is accomplished, and no time should be lost in its accomplishment. Unless the case is extremely urgent it always is best to have assistance, and while preparations are being made it is well to send for your nearest reliable fellow-practitioner.

Thorough aseptic precautions should be taken and, if time allows, the pelvic outlet should be rendered aseptic. As a rule

it is best to give an anesthetic; if the patient be not too weak, chloroform; but if the condition approaches collapse, ether is preferable.

Having gone so far, one of two procedures should be decided upon. If the previa is marginal, the placenta should be detached from the internal os until the margin is reached; it should then be pulled down through the os. This method originated with the late Dr. Reese Davis, of Wilkes-Barre, and formed the subject of an address before the State Medical Society in 1876. Having thus disposed of the placenta, the membranes should be ruptured and the head allowed to come down. By its pressure, aided by uterine contractions, which now come on, the hemorrhage is brought under control, the labor can now be allowed to take its normal course, or forceps can be applied if it should be found necessary.

In the majority of cases it is better, after rupturing the membranes, to do podalic version and terminate the labor as speedily as it can safely be done. Having brought down the feet one has a most effectual tampon in the breech and body of the child, and delivery can be accomplished quickly and with as little danger to the life of the child, as if the head is allowed to come first. I have used this method with entire satisfaction in three cases, mother and child in each case being saved. In two cases in which the head was delivered first both mothers recovered, but one child was still-born.

A word regarding the value of the injection of normal salt solution in cases of placenta previa. I have witnessed its great value in other cases, but never in such a wonderful degree as in a case of placenta previa which I saw in consultation about a year ago. The woman had had very copious hemorrhages for several hours which tampons and ergot had failed to control, so that when I saw her she was in a state of desperate collapse. The membranes had been ruptured for some time, but there was complete inertia of the uterus, and the pressure of the head only partially controlled the hemorrhage. Diffusible stimulants and strychnin hypodermatically had been freely given with but little effect. The woman was in a cold

clammy sweat, and almost pulseless, in fact at times entirely so. She was in a semi-comatose state, and there seemed little chance for her recovery. An enema of two or three quarts of lukewarm salt solution was given per rectum. It was retained about fifteen minutes, during which time there was a perceptible improvement in the condition of the pulse, then came not only expulsive contraction of the bowels, but of the uterus also, and with the aid of forceps the child was speedily and safely delivered. The mother, of course, was still very weak; an enema of salt solution was again administered, and she was left in a fairly comfortable condition. The physician in attendance informed me she made a good recovery.

To return to manual dilatation; there are several conditions beside placenta previa in which its use is indicated.

There are cases of inevitable abortion, where examination reveals a partially dilated os, inside of which the fetal or placental mass can be distinctly felt. It is impossible, without farther dilation, to consummate its delivery. The use of placen-

tal or fetal forceps is very unsatisfactory, and tamponing, as a rule, is not good treatment. I think it is generally conceded that the proper thing to do under these circumstances is to empty the uterus, and I know of no other instrument so satisfactory for this purpose as the hand. Having given an anesthetic to the point of complete relaxation, the hand can be introduced into the vagina, manual dilatation sufficient to allow the passage of two or three fingers, or the whole hand if necessary, can be performed, and the contents of the uterus safely and completely removed.

In cases of eclampsia, it is always best to accomplish delivery as soon as possible, and here, too, manual dilatation is of value.

Lastly, there are cases of labor at term, where, in the first stage, the pains are very strong, and hard, and dilation is very slow. Patients will sometimes suffer for many hours without accomplishing any material dilation. I think in properly selected cases, where chloral and like remedies give no relief, it is perfectly proper to perform manual dilation.

## CURRENT LITERATURE CONDENSED.

### The Surgical Treatment of Suppurative Pericarditis.<sup>1</sup>

The author advocated, as he had since 1876, the treatment of pericardial effusions in the same manner as pleural effusions; and stated that paracentesis was insufficient to cure suppurative pericarditis. Incision and drainage were essential and should be adopted so soon as diagnosis of pus in the pericardium was made.

The diagnosis of the purulent character of the effusion was only determinable by exploratory puncture. This should be done at the upper part of the left xiphoid fossa, close to the top of the angle between the seventh cartilage and the xiphoid cartilage. Pericardotomy should then be done after resection of the fourth and fifth costal cartilages in the manner described by the author.

The operation was believed to be novel in some of its details, though others have recommended, and operated by, various forms of resection. This method was devised to avoid injury of the left pleura, which is nearly always a complication in the ordinary methods of puncturing or incising the pericardium. As a rule, empyema is liable to occur as a sequel of pericardial puncture or incision in suppurative pericarditis.

The prognosis is good in pericardotomy for pyo-pericardium. In a table of twenty-six collected cases ten recoveries and sixteen deaths were shown. This gave a percentage of recovery of 35.4. Of the fatal cases at least nine were septic, and all the others who died had complicating lesions such as pleuritis or pulmonary cardiac or renal lesions.

The operation devised by Dr. Roberts consisted in raising a trap-door of the

<sup>1</sup> Dr. John B. Roberts, before the American Surgical Association, '97.



fourth and fifth costal cartilages, and connecting soft parts and using the tissues of the third interspace as a hinge. The internal mammary vessels and left pleura are thus exposed and pushed to the left so as to leave the pericardium uncovered and accessible to operation.

#### **Anesthesia of the Trunk in Locomotor Ataxia.<sup>1</sup>**

Since the sensory disturbances of tabes dorsalis have been subjected to careful study, it seems remarkable that anesthesia of the trunk should have escaped detection for so long a time. It is striking in location, limitation and extreme frequency. Hitzig has the credit of having first called attention to the symptoms, but Laehr has made by far the most extensive study of it.

The anesthesia is found in a band about the body, usually in the region of the nipple, and presents many unique and unexplained peculiarities. Unlike the analgesia commonly found in the extremities, it is tactile. When very slight it is discoverable only to the lightest touches, and sensation to pain is normal. When more marked there is also some degree of analgesia, but the band so affected is narrower than that of tactile anesthesia.

The area begins to develop as a narrow zone, or rather, two half-zones, one about either half of the body, and gradually broadens as the pathologic basis progresses. In a very early stage the areas may be incomplete, not reaching to the middle line, or restricted to the front or back alone. Laehr says that when the anesthesia is broader on one side than the other, it is by extension downward, the upper borders remaining nearly always on a level. To this I have found numerous exceptions.

Perhaps the most interesting peculiarity is that the area of anesthesia does not correspond to the cutaneous distribution of the intercostal nerves, but represents the innervation from spinal cord segments. Another characteristic is, that when the anesthesia is slight, it may almost or quite disappear if tested for a few minutes, so that the slightest touch may be felt. A narrow band of hyperesthesia may often

be found near the anesthetic area, as occurs in some cases of traumatism of the cord, etc. Hitzig says that this zone is particularly sensitive to cold. Another interesting fact is that the zones may be double, which would indicate the simultaneous invasion of different levels of the cord.

The question at once arises: May this band of anesthesia be found in other diseases? We must await the verdict of further experience, but even now a provisional answer in the affirmative may be given. Any process involving the posterior nerve root in the dorsal region might cause such an anesthetic band.

#### **Duties of a Medical Examiner as a Witness.<sup>2</sup>**

The first duty of anybody connected with the prosecution of crime is judicial; no person can properly, either as prosecuting officer or medical examiner, or as a witness, serve on a case except as a judicial officer in the first instance; a fact too often lost sight of both by prosecuting attorneys and by medical examiners. It is very essential for everybody first to ascertain the facts, and to find out exactly what is true, and then to be able to express that truth in such a way as to convince twelve men of at least ordinary telligence.

I have tried but one murder case in all my life, and in that case I had a medical examiner from this district who gave evidence, and a medical examiner from Halifax who gave evidence, and the difference between the two men illustrates exactly what I want to say. One of them had made his investigation as a judicial officer; the other had made his seemingly for his own aggrandizement. He had his own dignity to maintain; he had his own opinion to maintain. He had an absolute inability to make himself understood by any human being who listened to him.

Not only should the medical examiner ascertain all the facts which the autopsy shows, but should be able to make twelve men selected almost at random understand what he means when he states those facts. I have heard medical experts give testimony a great many times; sometimes I have understood them, and sometimes I have not. Hence, I say that a knowledge

<sup>1</sup>HUGH T. PATRICK, M.D., *The New York Medical Journal*, February 6, 1897.

<sup>2</sup>SHERMAN HOAR, *Boston Medical and Surgical Journal*.

of the English language is as essential as a knowledge of medical terms.

Dr. Holmes once said of a lawyer, that he had to half-know more things quicker than anybody else in the community; and you have got to get your lawyer, your prosecuting attorney, to half-know what you know, and be able to draw it out of you on the instant on the witness-stand; and you have got to get him into a condition of mind, by the use of ordinary, plain, Anglo-Saxon words, to understand your exact view of the case. You have got to get him into a condition where he can draw out from you what you want to present to the jury, to the twelve men, often of very limited understanding.

When you come to testify, you are so apt to qualify your judgment that you don't give your opinion, but your qualifications first. Give your judgment first, your reasons for it next, and any limitations upon your judgment last. The jury would understand you better if you did that.

Medical examiners should remember that they are judicial officers, part of the machinery of the Commonwealth to detect crime. As such judicial officers, they have no right to take sides in any case whatsoever; neither, as such, have they any right to take the side against the Commonwealth in any case which may be presented in the Commonwealth.

#### An Appeal for Fairness.\*

The signs of spring are multiplying on all sides, and the voice of the recent medical graduate will be soon heard in the land. There will be many of him, and not a few of her, and their ways will not be so easy as was the lot of those who took their degrees some years ago. Then, there was nothing for the recent graduate to do but to select a neighborhood, open an office, and await his success (or failure); but now a serious task is still to be mastered. State Boards of Examiners abound in the land, and the possession of a diploma is little more than a certificate of eligibility to the ordeal which they impose.

Before long these boards will be asking questions on a great variety of topics, more or less allied to medical work. Our

appeal is for strictness in the conduct of these examinations, and clearness and appropriateness in the questions. We have proof that cheating has, on some occasions, been rife; so frequent and bold, indeed, that it could scarcely have escaped the notice of the examiner-in-charge. From inspection of numerous question-papers, we know that questions are often impracticable in character, out of the proper bounds of the subject, or asked in obscure form.

Some allowance should be made by the examiners for the mental stress under which each candidate labors. This can scarcely excuse ignorance or stupidity, but it does bring about a certain degree of obtuseness and confusion, even with well-prepared students.

The regulations, in many states, by which those connected with medical teaching are ineligible to appointment on the examining boards, interfere with the selection of persons who would be especially qualified, in some respects, at least, to conduct proper examinations. We do not quarrel with the principle, however; there are good reasons why those connected with colleges should be excluded, but the examiners should make careful study of the methods in vogue in college examinations, and endeavor to follow the trend of these.

Especially is it important that all questions should be explicit in language, so that they may be understood in the same way by all, and require no verbal commentary by the examiner. Even at the risk of narrowing the scope of the examination, efforts should be directed to keep the questions well within the topic under discussion. A medical education is not framed with a view of developing general intellectual culture; it is intended as a preparation for obtaining a livelihood. Its practical aspect is its most essential one, and to the development of its clinical features all possible influences should be directed.

Chemistry and physiology are so nearly allied to entrance requirements, that it would seem advisable to omit them from the list of topics upon which the graduate is examined, or, as has been suggested, control the teaching in them by official examinations in intermediate years.

\* HENRY LEFFMANN, M.D., in *Philadelphia Polyclinic*.

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PHILADELPHIA, SATURDAY, MAY 15, 1897.

## EDITORIAL.

### THE PROPHYLAXIS OF TUBERCULOSIS.

Faith without works has been the great evil of the church; so, also, is it one of the worst tendencies of the medical profession. Most of the present generation of physicians can remember when the disbelief in bacteria, at least as related to medical and surgical disease, was prevalent, and although the disbeliever has so far lost popularity that he seldom dares to amuse himself with open sneers at the believer in germs, he still exists, and still persists in practicing on lines which ignore the bacterial cause of so many diseases.

In 1889, an eminent surgeon, though unable to withstand the growing favor in which the germ "theory" was held, used antiseptics, in a measure, under protest, and in his dress and his technic violated the principles of the antiseptics which he grudgingly used. In the same year a

prominent practitioner boasted of having gone direct from a case of erysipelas to perform internal version on a parturient woman without even washing his hands, and used the fact that the woman failed to contract blood-poisoning as an argument against what he considered a medical fad. In 1891, with no pretence of stating the results of original research, or of being in any way sensational, the writer, in a semi-popular lecture, emphasized the infectiousness of tuberculosis, and ventured to urge the adoption of disinfection and some degree of isolation as practical prophylactic measures. Many gave him the credit of having voiced a new doctrine, and the advocacy of an effort to eradicate tuberculosis was regarded as utterly foolish. The world, however, does move, and has reached the point where such views are no

longer considered startling, and where the laity is submitting with fairly good grace to measures for the limitation of tuberculosis, in so far as these measures are applied to the condemnation of meat, milk, and living cattle, and to the regulation of hospitals and similar institutions.

The time, then, has come when it is no longer sufficient for the physician to admit his abstract belief in the infectiousness and contagiousness of tuberculosis. He fails in his duty if he does not carry out in the practical management of tubercular patients, such hygienic measures as will tend to stop the extension of the disease. So far as personal observation goes, the excuse can no longer be made that these hygienic measures are impracticable, or that the laity is not educated up to the point of understanding them, and of putting them into practice.

To be sure, there frequently will be found individuals who are densely ignorant on this as on any other topic, and many persons supposed to be governed by moral and religious influences, who remain utterly indifferent to the welfare of others. We must expect, also, to meet with many who will needlessly sacrifice themselves and members of their family to the caprices of a sick relative, or who will insist that nothing shall be undertaken that will give the patient ground for the belief that he is seriously sick. But with all these exceptions, the fact remains that the majority of the intelligent laity are sufficiently informed and sufficiently skillful to carry out the simple rules requisite for limiting the spread of tuberculosis.

The writer has held for some years the conviction—and doubtless many others have arrived at the same conclusion—that heredity and predisposition are factors in the production of tuberculosis, relatively unimportant as compared with the presence of the germ. If heredity were so

marked a cause, we should certainly expect to see tubercular families wiped out of existence and the disease exterminated. Remembering that a fifth, or a quarter of all deaths from disease result from tuberculosis, and that, according to the Germans, a third of the civilized human race have tuberculosis at one time or another, we must concede that the predisposition is so general as to lose its significance. For example, no one would think of using predisposition as an explanation of the determination of sex, for the chances in each ovum for either sex are one in two. It is only a little less far-fetched to speak of predisposition in a condition in which the chances are one in three.

Cornet, of Berlin, has performed some interesting experiments to show that the liability to tubercular infection is not nearly so inevitable as has been supposed. For example, he has shown the air of a small room in which a consumptive was confined to be free from tubercle bacilli, so far as could be determined by collecting the air and making cultures from it, and then inoculating guinea-pigs. He has also shown that the sputum is the only frequent medium for disseminating bacilli, and that the tubercular process, when danger from excretion and secretion exists, is usually localized.

Thus, so long as the sputum or other obviously tubercular discharge is promptly disinfected, isolation of the tubercular patient is unnecessary. He even produces statistics, showing a diminution of mortality from tuberculosis in institutions where disinfection has been practiced, and contrasts different portions of the German Empire to illustrate the point that, where medical opinion and official regulations have considered the destruction of bacilli feasible, a slight general decrease in tubercular mortality has occurred, while those localities in which the opinion has pre-



vailed that this was impracticable, and that the only prophylaxis against tuberculosis consisted in increasing the resistance of the organism, have shown no such decrease.

These statistics may be misleading, but it is rational for each physician to urge that each patient shall be made to spit into a proper receptacle, that the sputum shall not be turned out upon the ground to dry and be distributed through the air, nor into the sewer to contaminate the water-supply of some one else. It may not be pleasant for the consumptive to know even vaguely the nature of his disease, nor to feel that he is a breeding-place of

pathogenic germs, but this is better than that he should remain a potential murderer.

It is practicable to save the life of an occasional infant whose mother would instill tuberculosis into its system with her milk; to stop the progress of an endemic of the disease in a household; to render one consumptive after another innocuous instead of a source of the plague. Patient by patient, household by household, hospital by hospital, the spread of tuberculosis can be checked. Let each physician do his duty, instead of holding back because he mistrusts that others will fail to do theirs.

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## OBITUARY.

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### TRAILL GREEN.

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In the death of Traill Green, A.M., M.D., LL.D., at Easton, Pa., April 29th, education lost a valuable friend, and science a shining light. Ripened by a useful life of fourscore years and four, surrounded by loving friends, without thought of fear, confident in the faith he had so conscientiously kept, he calmly awaited the summons and peacefully passed into rest. It was only of late years that his remarkable constitution began to give way, but his death had been expected for several days before the end. Few men have been so sincerely and personally mourned in a community, since few have established such repute for benevolence, magnanimity and truth.

Traill Green, born in Easton, May 25, 1813, was the son of Benjamin Green, and a lineal descendant of Richard Green, who came from England early in the eighteenth century.

He was graduated from the Minerva

Seminary, Easton, and shortly thereafter was offered a professorship in a college, but declined in order to study medicine. He was graduated from the University of Pennsylvania in 1835, and entered upon the practice of his profession in Easton. In 1837 Dr. Green was made professor of chemistry at Lafayette College. In 1841 he was honored by Rutgers College with the degree of A.M., and during that same year he was called to the chair of natural sciences in Marshall College, at Mercersburg, where he remained until he returned to Easton in 1847. The degree of LL.D. was conferred on him by Washington and Jefferson College in 1866.

He taught in Lafayette College from 1853 to 1874, and was a trustee of the college from 1837 to 1841, and from 1881 until his death. June 24, 1890, following the resignation of Rev. Dr. J. H. Mason Knox, he was elected president of the college, holding office until the election of

Dr. E. D. Warfield in 1891. The astronomical observatory at Lafayette was built at his personal expense. When Pardee Hall was built he organized the Pardee scientific department, and was its dean until his death.

Dr. Green took a keen interest in science, and for nearly a half century was a member of the American Association for the Advancement of Science. He made collections in botany and zoology, and had a large and valuable collection of minerals. In 1853 he disposed of the skeleton of a mastodon found in Orange county, New York, to Williams College, there being no room suitable in Lafayette College at the time for its display. He received from Williams College a reflecting telescope, which he retained until 1865, when he placed it in the astronomical observatory at Lafayette College, where it remains.

He was one of the organizers of the Northampton County Medical Society, and during the forty-eight years since, had

always taken an active interest in its affairs, serving several times as its president. He was the first president of the American Academy of Medicine, and a member of many other scientific bodies. He also served for a number of years as a trustee for the State Hospital for the Insane.

Dr. Green was the author of many valuable contributions to science and medicine, and took a keen interest in educational matters. He served upwards of a score of years upon the Easton school board, several terms as its president.

His life was spent in consistent effort to benefit humanity. Never was suffering man, woman or child who appealed to him for aid or relief turned away from his door, and if such deeds of charity and kindness become as attendant witnesses to the worth of the newly-freed spirit, then surely the soul of Dr. Green had a grand escort on its journey to the Celestial city to receive the reward of a noble, generous, honest life.

## PERISCOPE.

The removal of a large growth, filling up the right buccal cavity, that had caused ulceration through the upper lip and great deformity of the face, is related in the *Canadian Practitioner* by Dr. James Bell. At the age of 12 years the patient had suffered from "fever," which had lasted a considerable time and had been followed by a slow convalescence, during which, she stated, that the teeth in the right side of the lower jaw had become loose and dropped out one by one, but without any pain or ulceration of the gums. The teeth had all dropped out in about six months, and then she began to notice a "shell-like" mass on the gums from which the teeth had fallen, apparently in the area occupied by the molar teeth. For ten years this growth was gradual, and gave her practically no trouble. Then deformity of the face began to be noticeable, and increased steadily. The growth was found to fill the whole right cheek, and to have ulcerated through the upper lip at one point, and the whole lip was greatly swollen. The point which presented at the angle of the mouth was evi-

dently calcareous. The fetor was horrible and the mouth so sensitive that no manipulation was possible. The mass consisted simply of a large concretion the size of a large hen's egg, lying free in the mouth, having formed a cavity for itself by displacement of the soft parts and absorption of the alveolar border of the lower jaw. A couple of teeth were embedded in its lower border, and it was clearly an enormous growth of "tartar" from the teeth. The ulceration of the mouth and lip healed rapidly, and the patient was discharged in a week quite well, except for the deformity which had occurred during the growth of the mass. The mass, which was oval in shape, measured 13½ cm. in its greatest circumference, and 11 cm. in its smallest circumference.

Dr. H. M. Christian (*Therapeutic Gazette*, January 15th), after a careful study of statistics, on duration of acute gonorrhea under treatment, draws the following conclusions: 1. That gonorrhea is a much more prolonged

and serious affection than it is usually considered to be by general practitioners of medicine, and by the laity. 2. That in two-thirds of all cases uncomplicated the period of time necessary to obtain a complete cure is from six to ten weeks. 3. In that small proportion of cases in which the entire urethra does not become involved, the disease being confined entirely to the anterior urethra, we can, as a rule, expect complete recovery in about four weeks. 4. The necessity of impressing upon the profession in general the importance of making examinations of the urine before deciding that an attack of gonorrhea is positively cured.

**The terminology of a rapidly progressing science** must of necessity be in a continual state of instability. New terms are constantly being substituted for old ones, and the old ones are as persistently used as if no new ones had been called into existence. The result is an unfortunate state of affairs, which seems as yet to be quite without a remedy. This is particularly true of medicine. Probably no other science contains such an array of words which inadequately or incorrectly represent the facts they were designed to describe. The respect engendered of age has apparently rendered many of them unassailable, and we find our recent text-books, the work of the most enlightened minds of our time, still burdened with terms which have absolutely no claim to further respect.—*Boston Med. and Surgical Journal*.

A case of **congenital defect in the pectoral muscles with webbed fingers** is reported in Virchow's *Archiv* by Prof. Hoffmann, of Heidelberg. The patient was a man aged forty-seven years, in whom the sternal part of the right pectoralis major was entirely absent, the clavicular portion of the muscle, as well as the pectoralis minor, being well developed. The whole of the right upper extremity was shorter and of smaller diameter than the left. The fingers of the right hand had assumed the claw position, and some of the joints were ankylosed. Between the right index and middle fingers, as well as between the latter and the ring finger, there was a web which reached to the middle of the first phalanx, while between the ring and the little fingers the web extended between even the first phalanges. There was no sensory impairment, and in spite of the atrophy the right arm was as strong as the left. Prof. Hoffmann has collected from medical literature no less than ten cases of defect in the pectoral muscles with webbing of fingers on the same side. In the majority the defect was found in males, and affected the right side. The deformity is no doubt the result of a defect in development.—*Lancet*.

A new and simple mode of treatment, a **substitute for amputation**, has been introduced in France, by which, it is claimed, a large proportion of injured limbs, now usually amputated, can be saved. The method, which is due

to Dr. Reclus, was recently described before the French Congress of Surgery: Whatever the extent or gravity of the lesions, he never, under any circumstances, amputates the injured limb, but merely wraps it in antiseptic substances by a veritable embalming process, leaving nature to separate the dead from the living tissues. This method of treatment possesses the double advantage of being much less fatal than surgical exaresis, and of preserving for the use of the patient, if not the entire limb, at any rate a much larger part than would be left after amputation. He advocates this very conservative treatment on account of the excellent effects of hot water, which he uses freely. After the skin has been shaved and cleansed from all fatty substances by ether, etc., in the usual way, a jet of hot water 60° to 62° C. (140° to 144°), but not higher, is made to irrigate all the injured surfaces, and to penetrate into all the hollows and under all the detached parts of the wound without exception. This is the only way of removing all clots and to wash away all foreign bodies, together with the micro-organisms they may contain. The advantages of hot water at this high temperature are three-fold: First, hot water at this temperature is antiseptic, heat greatly increases the potency of antiseptic substances; second, it is hemostatic; third, it helps to compensate for the loss of heat resulting from the bleeding, and especially from the traumatic shock. After the "embalming" process, and the dead tissue has been separated from the living, the surgeon has nothing to do except to divide the bone at a suitable spot. According to Reclus, the results attained are remarkable.—*Med. Times*.

**Hints as to the local treatment of acne**, are given by G. T. Elliott, in the *New York Post-Graduate*. All the remedies which are of any benefit are to a certain degree antiseptic in action, and are in the form of lotions, salves and powders. When the process is acute, and the inflammatory symptoms are active, then soothing applications are at first preferable, such as a two per cent. salicylic acid ointment, or a lotion of

R—Magnes. Carbonat.  
Zinc Oxid. aa,  
Hydrarg. Bichlor.,  
Aq. Rose,  
M. Sig.

3j  
gr. j to ij  
3iv

In place of this a dilute lead wash or the lot. plumbi et opii can be used or any other mild application. The remedy used should be kept so long as possible in contact with the surface, and not simply dabbed on once or twice daily. When the acute symptoms have subsided, or when the inflammatory reaction is more of a chronic type, and this is the rule, then more stimulating applications are necessary. The majority of those which offer good results contain sulphur, either in powder form, or in an ointment or a lotion. The sulphur mixed with starch in the proportion of 1 to 8 or 1 to 4 may be used, or it may be incorporated in Bassorin

paste. When used as an ointment, its strength should be at least 10 per cent., and even 20 or more per cent.

R—Sulph. Sublim.,  $\mathfrak{z}\text{ij}$   
 Ether's, Spts. Vini, Glycerini  $\mathfrak{a}\mathfrak{a}$ ,  $\mathfrak{z}\text{ij}$   
 Aq. Calcia, Aq. Rosæ  $\mathfrak{a}\mathfrak{a}$ ,  $\mathfrak{z}\text{iv}$   
 M. Sig.;

or,

R—Sulph. Lactis,  $\mathfrak{z}\text{iv}$   
 Tinct. Saponis Viridis,  $\mathfrak{z}\text{x}$   
 Glycerini,  $\mathfrak{z}\text{vj}$   
 Spts. Vini,  $\mathfrak{z}\text{j}$   
 M. Sig.,

are both good lotions in chronic cases. One of the most useful is:

R—Potass. Sulphuret.  $\mathfrak{z}\text{j}$   
 Zinc. Sulphat.  $\mathfrak{a}\mathfrak{a}$ ,  $\mathfrak{z}\text{iv}$   
 Aq. Rosæ,  
 M. Sig.

All these are applied at night after a preliminary soap and water washing, and allowed to remain over night. They produce a certain amount of reaction, a more or less marked temporary shrivelling and scaling of the skin, but are not to be dispensed with for that reason. If their effects are severe, they can be weakened in strength or used less frequently. Vlemminckx's solution is also at times of benefit, as is also a paste:

R—Sulph. Sublim.,  $\mathfrak{z}\text{ss}$   
 Glycerini,  $\mathfrak{z}\text{vj}$   
 Spts. Vini Camphorat.,  $\mathfrak{z}\text{x}$   
 Aq. Rosæ,  $\text{q.s.}$   
 M. Sig. (Besnier).

The mercurial preparations are very useful, but care should be taken not to use them when any sulphur preparation is being or has been applied. A favorite lotion is:

R—Hydrarg. Bichlor., gr. xv.  
 Ammon. Chlor. gr. xxx. to gr. lxx  
 Spts. Vini,  $\mathfrak{z}\text{iv}$   
 Aq. Rosæ, ad.  $\mathfrak{O}\text{j}$   
 M. Sig.;

or the corrosive sublimate can be used in any other combination desired. Ointments are of value only in particular cases when uncomplicated by a seborrhea oleosa, and when there is a natural dryness of the skin. The ointments may be a sulphur one, or of beta naphthol, 5 to 15 per cent.; or of ichthyol, 10 to 25 or more per cent.; or of resorcin, 5 to 20 per cent.; or of some of the mercurials; the white precipitate, the ungt. hyd. oxid. rub., 5 per cent.; or the ungt. hyd. nitratis,  $\mathfrak{z}\text{j}$  to  $\mathfrak{z}\text{ij}$ , ad  $\mathfrak{z}\text{j}$ . A very useful combination when much pustulation exists is:

R—Ungt. Hyd. Oxid. Rub.,  $\mathfrak{z}\text{ij}$   
 Ungt. Sulphuris,  $\mathfrak{z}\text{vj}$   
 Ungt. Zinc. Oxid., ad.  $\mathfrak{z}\text{ij}$   
 M. Sig.

Comedones should be removed by the practitioner himself in successive sittings. Any one of the comedo extractors in the market is all that is necessary for that purpose. Scraping

the face with a curette has been recommended, but personally Elliott has not obtained any benefit from this procedure, and he has seen a great many patients who had thus been treated, and who were in no way benefited. After the comedones have been extracted the affected portion of the skin should be thoroughly washed with some antiseptic solution (Hg. Cl., 1 to aq. 1,000 or 2,000; boric acid, 5 per cent. in alcohol, etc.), and later in the day other remedies ordered may be applied.

Surgeon-Captain F. P. Maynard (*Indian Medical Gazette*, February), records his experience of eucain in 20 operations: Six cataract extractions, 1 pterygium, 2 iridectomies, 2 iridectomies, 3 needlings, 4 massagings of the cornea, and twice in his own eye. The instillations consisted of 3 drops of a 10 per cent. boiled solution. The results are described under the following heads: Pain usually lasted half to two minutes, and ceased as suddenly as it began; burning in 4, severely so in 1, slight in 13, very slight in 1, and none at all in 1. Lachrymation of blood vessels lasted half to three minutes; severe in 1, moderate in 7, slight in 8, very slight in 2, and none at all in 2. Injection of blood vessels came on with the lachrymation, and lasted several minutes longer; it involved the deep ciliary zone as well as the conjunctival vessels, the latter losing their injection first; it was severe in 1, moderate in 13, slight in 2, very slight in 2, none at all in 2. These effects were more marked in fair-skinned persons, and were less marked the blacker their skins. Anesthesia came on in one to three and a half minutes, usually within one minute, becoming complete within three. In no case had the anesthesia passed off before the operation was completed. In all cases both cornea and conjunctiva were rendered anesthetic, the cornea first and most completely. In two cases not included among those enumerated above eucain failed to produce anesthesia of the conjunctiva, though the cornea became anesthetic. In them the conjunctiva was much inflamed and somewhat chemosed, and cocaine equally failed. Maynard has since used a 2 per cent. aqueous solution, but finds that in his own eye it produces as much smarting pain as the 10 per cent. solution, while the anesthesia is less complete and less lasting. In other cases he has found several instillations of a 2 per cent. solution act as well as one of 10 per cent., but it takes longer to produce complete anesthesia.—*British Med. Jour.*

There are no better intestinal antiseptics (*Clin. Lan. Clin.*) than benzonaphthol and salicylate of bismuth. A child of six months can take a grain and a half of each at a dose.

A simple and effective treatment for itching piles is said to be (*Med. Age*) the application once daily after defecation of a few drops of collodion on absorbent cotton.



**Artificial camphor that closely resembles** the natural product (*Cin. Lan. Clin.*) is now manufactured by passing hydrochloric acid into spirits of turpentine surrounded by a freezing mixture.

The best way to **remove blood stains** says the *Centraibl. f. Gyn.*, is to soak the towels, etc., in warm water, to which a teaspoonful of tartaric acid has been added. No soap is needed.—*Med. Times.*

**A law has been enacted in New York** making it a felony for any one except a duly licensed physician to have an anesthetic on his person with the intention of administering it to another person. Violation of this edict will be regarded as presumptive evidence of guilt.—*Med. Times.*

**Potassium iodid has been employed** in 100 cases of biliary calculus (Dunin, *Univ. Med. Jour.*) during the past four years, with the best results, not in those where there were merely rare attacks of extremely violent hepatic colic, but in which the patients were more or less constantly troubled with hepatic pain, and where the liver was sensitive to the touch.—*Med. Times.*

**Administering to the mother the** volatile oils, such as anise, nutmeg, etc., by imparting a pleasant flavor to the breast milk, will sometimes cause the child to suck more eagerly and vigorously, and thus by reflex irritation of the nipples serve to increase the flow of milk which is becoming scanty.—*Med. Times.*

Dr. Bardach (*Derm. Zeitschr.*) thinks that the **irritation of the sebaceous glands** is brought about by the increase of solids in the blood. In these cases a quick cure is effected by increasing diuresis. For local treatment he suggests a soap, containing about one and one-half per cent. of iodate and bromate of sodium.

J. C. Clemesha, M.D., of Buffalo, N. Y., reports a case of **marked occasional variations in the color of the irides**. He was consulted by the patient on account of deficient vision for distance and discomfort after using the eyes a length of time for near work. Examination into the state of refraction showed myopic astigmatism and suitable glasses were prescribed. During the consultation she volunteered the statement that the color of her eyes varied from time to time, which fact had been noted by her family physician and a number of her friends. The color of the irides varies from black to a bluish-gray through the various shades of brown, brownish-yellow, yellowish-green. Sometimes they resemble the color of a cat's eyes. She is strong and healthy, has suffered from no serious illnesses, though the fact must be noted that her hair, dark at the time,

changed to gray at the age of eighteen, and has remained so ever since. Mental emotion seems to be a factor in the causation of these changes.

The following practical observations on the **surgical use of cocain** are quoted by the *American Therapist* from the *Codex Medicus*:

1. The use of cocain should not be abandoned because its irrational employment has produced deleterious results.

2. Always make a thorough physical examination of the patient before injecting the drug.

3. It should not be used in cases showing organic diseases of the brain, heart, lungs or kidneys, or in persons of neurotic diathesis.

4. Children bear it fully as well as adults.

5. The patient should always be placed in a recumbent position prior to its employment.

6. Constriction should be used whenever possible to limit the action of the drug to the desired area.

7. Use a freshly prepared solution for each case.

8. Distilled water should always be employed, to which phenic, salicylic or boric acid should be added.

9. A two per cent. solution has a better effect and is safer than solutions of greater strength.

10. Never inject a larger quantity than one and one-eighth grains when no constriction is used.

11. About the head, face and neck one-third of a grain should never be exceeded.

12. When constriction is possible, the dose may be as large as two grains.

13. Every slight physiologic effect is not necessarily to be taken as cause for alarm.

14. Cocain does have effect upon inflamed tissues.

15. In case alarming symptoms occur, use amyl nitrite, strychnin, digitalis, ether or ammonia.

To which we will add: Always use a chemically pure product, free from isatropyl and cinnamyl-cocain as well as other impurities, the presence or absence of which can be readily ascertained by the simple tests of the United States pharmacopeia.

**The alarming increase in the number** of murders and suicides in this country is shown from the statistics recently collated as they relate to 1895 compared with preceding years: From these it appears that the number of murders (including homicide) in the United States attained last year the unprecedented figure of 10,500, as compared with 9,800 in 1894, 4,290 in 1890, and 1,808 in 1885. Hence, the increase of homicidal crime is of a most rapid and serious nature. The suicides in 1895 numbered 5,750, as compared with 4,912 in 1894, 2,040 in 1890, and 978 in 1885. The legal executions in 1895 were 132, being the same as in 1894, whereas in 1890 they were 102, and 108 in 1885. The "lynchings" or illegal executions were 171 in 1895, as compared with 194 in 1894,

127 in 1890, and 108 in 1885. Hence there was a decrease of 23 last year as compared with 1894. But both as regards legal and illegal executions in the United States there is an extraordinary difference between the ratio of increase in the two classes and the amazingly rapid development of murder of recent years. Thus, the combined legal and illegal executions for the 1,808 murders in the year 1885 were 289, nearly as many as the combined number (303) for the 10,500 murders in 1895.—*Chicago Tribune*.

A scientifically valuable article by Mrs. Winfield S. Hall, of Chicago, carefully and systematically records the growth of the child for its first 500 days, and gives, in its minutest detail, the psychical development.—(*Child's Study Monthly*).

The conclusions as to the development of the senses are as follows:

1. The perception of light is the first step in the development of the sense of sight.

2. The perception of the light reflected from bright-colored objects is the second step in the development of sight.

3. The gradual development of the power of directing the eyes upon objects (fixation), indicates the course of the development of the visual perception of objects, because: (a) Fixation of the eyes is, in all animals, capable of binocular vision, accomplished by an associated co-ordination of the voluntary muscles which direct the eyes, and of the involuntary ciliary muscles which cause the focusing of the rays of light upon the retina. (b) The co-ordination just cited is inherent; there is, therefore, no reasonable doubt that the formation of a clear image of an object upon the retina is coincident with the convergence of the eyes upon the object. (c) The psychical perception of objects cannot precede the formation of their image upon the retina, i. e., cannot precede fixation of the eyes upon objects.

4. The time when visual perception becomes relatively clear precedes the following of moving objects by the eyes, because: (a) This act is a voluntary one; and (b) the child cannot will to follow the motions of an object which it does not perceive.

5. Having established these two propositions—(I) Visual perception cannot precede fixation; (II) Visual perception must precede the following of moving objects by the eyes—it remains only to establish the dates when these two things were observed, and we shall have the limits between which visual perception of objects developed: (a) Fixation is definitely observed first on the twenty-eighth day. (b) Voluntarily following a moving object was first noticed on the thirty-second day. (c) Therefore, in this child, a clear visual perception of objects was established in the fifth week.

6. The differentiation and recognition of forms begin earlier and develop much more rapidly than the differentiation and recognition of color.

7. Sensitiveness to vibrations of the air was manifest on the first day.

8. Differentiation of the character of sounds, whether agreeable or otherwise, precedes the recognition of sounds.

9. The attention is held much more closely when two senses are affected than when only one is affected.

10. The effect of the broken monotony of sound is not less marked than the effect of broken silence.

The progress of the development of the emotions gives the following conclusions:

1. Fear and anger—the animal emotions—were very early exhibited.

2. Affection and sympathy—the higher emotions—were much later developed.

3. Compassion—one of the highest emotions—did not appear until near the close of the five hundred days.

4. Fear, being in every case allayed or dispelled, came to be seldom exhibited.

5. Outbursts of anger being in no case allowed to avail anything, were very infrequent.

6. Sympathy and affection, being always encouraged, grew rapidly and became habitual.—*Am. Med. Surg. Bulletin*.

To prevent wound infection during operation from an infected scratch or sore upon the hands of the surgeon—a most frequent source of septic trouble, after the hands and arms are made aseptic, dip them in strong ammonia water, or in a solution of oxalic acid, says Dr. Horace T. Hanks in the *American Med. Surg. Bulletin*. This procedure will instantly reveal to the surgeon the least abrasion of the skin from any cause. All small abrasions, or separations of continuity of skin, should be painted with flexible collodion, and immediately covered with a few fibres of absorbent cotton. Dry this dressing quickly with heat from alcohol lamp, and again paint with flexible collodion, and dry in the same manner. Then sterilize finger in 1 to 100 bichlorid solution. If the wounds are on the joints, apply a strip of adhesive plaster over the cotton and collodion dressing, passing the plaster quite around the finger, at least twice. Fasten this dressing securely with thread. Sterilize finger or hand and dressing in 1 to 100 bichlorid solution.

The latest treatment of burns of the first and second degree consists of the application of ichthylol. It is said to be very efficacious in alleviating pain, reducing edema and promoting healing. It is applied dry—one part ichthylol to two parts oxid of zinc or boric acid, the powder being spread evenly over the surface; if there is any reason why the dry dressing is objectionable, one may order it in ointment (10 to 30 per cent.), or in combination of the two methods.—*American Med. Surg. Bulletin*.

**Uncontrollable vomiting after an** intra-abdominal surgical operation is usually a sign of interference in the circulation of a vital organ. Its presence is far more ominous than an abnormal pulse, respiration or temperature, and when it has persisted for more than twenty-four hours without any abatement, the idea of reopening the abdomen should be entertained with the hope of relieving some internal strangulation or tension.—*International Journal of Surgery.*

Pediatrics gives a remarkable history of **hysterectomy in a child nine months of age**, by Israel. The patient was a girl of healthy family, who suffered at the early age of seven months from profuse hemorrhages of the vagina. The physician removed a partly decomposed vaginal polypus of the size of a pigeon's egg. A microscopic examination proved it to be a sarcoma. Prof. Israel was engaged to do a radical operation. The vaginal exploration revealed an irregular, rather firm tumor of the size of an almond, which filled the posterior portion of the vagina, obstructing the passage to the vaginal portion of the uterus, and forming a mass with the uterus itself. Under chloroform narcosis, the field of operation was exposed by an incision reaching from the posterior superior spine of the ilium to the tip of the coccyx, carefully avoiding the nerves and pudendal artery. The greatest difficulty experienced, owing to the minute proportions of the parts, was the liberating of the vagina from its surrounding connections. A small peritoneal tear was made use of to draw the retroverted uterus out of Douglas' cul de sac, to free it from its adnexa, and to remove from the wound in this way the whole internal genitals in toto, without bringing the sarcoma in contact with any of the surrounding parts. The vagina was then cut off about 1 cm. above the vestibule, and the wound sewed up. In four weeks the patient was discharged cured.—*Am. Jour. Surg. and Gyn.*

**A necrotomy not an autopsy.**—Mr. A. of the coroner's office, was in a sad quandary. In one hand he held a medical dictionary; the other, which he allowed to hang listlessly by his side, grasped a pen. Before him, upon his desk, lay a large sheet of paper, upon which he had been writing. "Well," he remarked, after a period of thoughtfulness, "I give it up. There's something in a name after all. I have been trying for the last hour to fill out a requisition blank. Now here's the word autopsy. Some of our smart doctors have been finding fault with the way the word has been used in this office." "Why," said I, "the word autopsy means the cutting." "There's where you're wrong," he interrupted; "it means no such thing. Listen to this: 'Autopsy: Examining or seeing one's self, self-inspection. The word is strangely misapplied to the post-mortem study of the body of another.' Look at yourself in a glass, and, according to this definition, you per-

form an autopsy. That ought really to be a word for the exclusive use of women. Now," he continued, "there is the word necropsy, 'the examination of a dead body.' But that hardly fills the bill. It may be a merely superficial examination. Here, though, is the word necrotomy, 'the dissection of a dead body.' This appears to hit nearer the mark, but how awkward this would sound: 'Coroner B. performed a necrotomy yesterday in the case of, etc.,' but, I believe that I will stick to the first principles. Every one knows what is popularly meant by the word autopsy, and some of our most eminent physicians have used the term in the sense in which I have always understood it."—*Jour. A. M. A.*

**A remarkable case of extravasation of urine** is reported by Richard Barwell (*Med. Press and Circular*). The man, æt. 36, previously to November, was perfectly healthy. One night, after coitus, in which nothing unusual occurred, he went to sleep, and on waking next morning found the scrotum much swollen. During the next few days the swelling increased. Five days after, he had a subnormal temperature, a rather feeble, quick pulse 108, tongue slightly furred, the constitutional symptoms in regard to the local condition being slight, and he said he felt quite well up to four hours ago, and even now only "a little down." The scrotum was greatly distended, boggy to touch, red and studded with blotches here and there of dark-brown discoloration. The penis was but slightly swollen, or reddened and free of sloughy spots, while the perineum, much distended to within a very short distance of the anus, exhibited two sphacelated spots. He asserted that he never had any difficulty in passing urine, which flowed in a full-size stream. Deep incisions were made in the perineum and scrotum, exposing the superficial muscles of the urethra and the testicles. The sodden tissues were full of urine, with the usual ammoniacal sloughy odor. One bleeding vessel, being too rotten to bear either torsion or ligature, was secured by leaving on it a pair of forceps; the very soft state of all tissues rendered interference with the urethra inadvisable. Five days after the incisions were made he lost about four ounces of blood by the rupture of a vessel in or close to the right testicle. This depressed his health considerably, but freer stimulation overcame the condition in about eight hours. The rare and interesting features of this case lay in the local condition. Rupture of the urethra, as an immediate result of coitus, had once or twice been reported, but invariably in the penile portion of the tube, never, as far as he was aware, in the membranous part. A No. 12 catheter passed into the bladder without encountering the slightest obstacle, and treatment for the urethra was, therefore, unnecessary. The man lost by sphacelus about four-fifths of the scrotum, but the parts healed, and the whole was quite sound exactly six weeks after, the testicles being enclosed in a new bag, which, though it looked tight, interfered neither with comfort nor function.

## NEWS AND MISCELLANY.

**Use of xeroform in surgery.\***—For years past chemistry has been pouring upon us a flood of new remedies, for each of which all manner of good qualities have been claimed. The majority of them have had an ephemeral life, and have soon disappeared, leaving only disappointment. It is not surprising that new preparations are now greeted with distrust. In spite of this, I venture to make a plea for xeroform, because I am convinced that it is a valuable antiseptic agent, having advantages over older antiseptic remedies sufficient to make it desirable for practical use.

1. Xeroform possesses powerful antibacterial action, and renders the toxins and ptomaines innocuous, on account of the ease with which bismuth is separated from it.

2. Secretion is reduced to a minimum, and the surfaces and edges of aseptic operative wounds adhere together with the greatest rapidity. In suppurating and infected wounds the production of pus is greatly diminished. The amount of secretion is small, and what there is of it is dried up, and kept from decomposition by xeroform. A dressing may remain in place for days without becoming saturated with the discharges. Xeroform is especially suitable for permanent and dry dressings.

3. It is a powerful deodorizer. Even in infected and suppurating wounds and ulcerations the discharges have no repulsive odor. This is especially noticeable in wounds connected with the gastro-intestinal and the genito-urinary tracts, the secretion from which is notoriously foul-smelling. This is explained by the sulphur combinations that give rise to the odors uniting with the bismuth to form the odorless sulphate, as is proved by the fact that in such cases the xeroform gauze always becomes blackened.

4. Even in very extensive wounds, such as amputations of the breast with removal of the axillary glands, there is neither redness, swelling, nor edema of the margins of the wound after the dressing has been in place for several days.

5. It relieves pain. So soon as the bismuth contained is released from combination by the action of the secretions from the wound, it is precipitated as a covering which protects the exposed and sensitive nerve endings. None of the patients that I have treated with xeroform complained much of pain, and in many cases there was complete analgesia.

6. It is absolutely non-poisonous. It has been administered internally in daily doses of 5.0 to 7.0 grams (75 to 105 grains) by Hueppe, without doing harm. Poisoning from external use is out of the question, since small quantities only are required to produce its full effects. I

have never seen irritation of the nervous system, or disturbances either of the gastro-intestinal tract or of the kidneys from its use.

7. Accelerates granulation and cicatrization. This is especially noticeable in old wounds with weak and feeble granulations, that have been treated by other methods.

8. It is a hemostatic. This is to be attributed to the fact that it causes rapid coagulation of the blood; and again to its desiccating properties, which give the blood clots the necessary firmness and adhesiveness.

9. Together with the absence of pain and irritation in the local disease process, the general functional disturbance is very slight, and is often altogether absent. Severe operative procedures ran their course without any fever.

A non-surgical process in which xeroform has shown itself efficacious is the moist form of eczema. I have used it repeatedly in moist eczemas, both acute and chronic, with the best effects, and especially in the moist eczemas, mycotic in origin. On account of the great tendency in eczema to the formation of crusts and scabs, a thorough cleansing of the affected parts must be made before the powder is applied.

Xeroform is employed externally in powder form, as a gauze (10, 20, 30 per cent.), as an ointment, in 10 per cent. suspension, as a pencil, and in suppository. The method in which I used it was exactly the same as for iodoform. The cavity, or wounded surface, was dusted with xeroform, and then covered or tamponed with the xeroform gauze. Xeroform gauze can be sterilized at 110° C. (230° F.). Irrigation with an antiseptic fluid may precede the dressing; but I purposely refrained from doing this in a number of my cases, only cleansing the field of operation with sterilized swabs. There was no difference in the course of the wound.

Since the effect of xeroform is only developed when it comes in contact with the tissue fluids, it is absolutely necessary to remove with the utmost care all scabs, crusts, scales, fragments of necrotic tissue, clots, pus and detritus from the wound and its vicinity before it is applied. This must be repeated at each change of the dressing; since without it the xeroform may remain indifferent, and even give rise to pus retention under the new formed scab.

**The meeting of the National Society of Digestive Specialists** (the name is descriptive, no formal organization having yet been effected) is expected to take place on June 3, 1897, in Philadelphia. While it is probable that future meetings will be held annually during the period adopted by the American Medical Association, an independent organization, is favored by most of the applicants. The attendance at the initial meeting will probably be between twenty and thirty, including several general practitioners. Papers are promised from Friedenwald, of Baltimore; Reed, of Atlantic City; Tuley, of Louisville; and Benedict, of Buffalo.

\*Josef Grünfeld, *Wien. Medicin. Blätter*, Jan., 1897.